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ABSTRACT

This guide is designed to assist local educational agencies in the design, development, implementation, operation, and administration of vocational-technical education programs in Michigan. All aspects of this document are designed to concur with the Michigan State Plan for Vocational Education as well as the Michigan School Code and subsequent administrative rules and regulations as promulgated by the Michigan State Board of Education. The five sections of the guide cover program development and operation; special populations programs and services; vocational guidance; planning, evaluation, and finance; and other vocational education activities. A glossary is also included (Author/KC)

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Administrative Guide

for

Vocational-Technical Education

in

Michigan

1987

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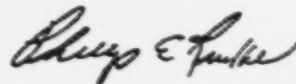
Administrative Guide
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FOREWORD

This Administrative Guide is designed to assist local educational agencies in the design, development, implementation, operation and administration of vocational-technical education programs in Michigan. All aspects of this document are designed to concur with the Michigan State Plan for Vocational Education as well as the Michigan School Code and subsequent administrative rules and regulations as promulgated by the Michigan State Board of Education. The intent is to state in specific terms those operational details which should be followed by local educational agencies desiring state and federal financial assistance for operating approved vocational-technical education programs. We hope you will find the document useful.

If you have questions or experience problems with any facet of your vocational-technical education programs, the Michigan Department of Education, Vocational-Technical Education Service, has a staff of highly qualified specialists who are available to assist your agency. For names and telephone numbers of appropriate individuals, you may refer to the Administrative Organization Chart of this document.



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January, 1987

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TAB I

GLOSSARY

Of Terms And

Organizational Acronyms

GLOSSARY OF TERMS AND ORGANIZATIONAL ACRONYMS*

<u>TERM/ ACRONYM</u>	<u>DEFINITION</u>
AAVIM	American Association of Vocational Instructional Materials
ACS	Activities Classification Structure
ADDED COST	The added costs of a vocational program are measured by calculating the difference between the average cost of a given or a specific vocational program and the average cost of the alternative secondary academic or "general" education program. The added cost factor is the differential.
ADVOCNET	Adult and Vocational Education Network for electronic mail among states and the U.S. Department of Education.
AEE	Agriculture and Extension Education
AHEA	American Home Economics Association
ANA	American Nurse's Association
APP	Annual Program Plan (Departmental)
AREA DESIGNATION	The action by the State Board of Education specifically identifying the service area, operating agency, and facilities for providing vocational education on a basis normally involving more than one school.
ASETS	Achieving Sex Equity Through Students
ATUN	Automotive Technical Updating Network
AVA	American Vocational Association
AVC	Area Vocational Center
BAT	Bureau of Apprenticeship and Training (U.S. Department of Labor)
BET	Bureau of Employment and Training (Michigan Department of Labor)
BIA	Bureau of Indian Affairs
BLS	Bureau of Labor Statistics
BOB	Bureau of the Budget (State Legislature)

*Listed alphabetically by
term/acronym

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
BOEC	Business and Office Education Clubs. The official vocational student organization serving office education students and instructors. Affiliated at the national level with OEA.
BRS	Bibliographic Retrieval Services
CA&E	Career Awareness and Exploration
CAREER EDUCATION CONSORTIUM	An interdisciplinary, interinstitutional group of teacher educators established to plan, develop, and implement inservice training for LEA personnel.
CARL D. PERKINS VOCATIONAL EDUCATION ACT OF 1984	The Perkins Act (P.L. 98-524) continues federal assistance for vocational education through fiscal year 1989. The Act is intended to make vocational education programs accessible to all persons, including handicapped, disadvantaged, single parents and homemakers, adults, participants in sex equity programs, and criminal offenders. The Act is also intended to improve the quality of vocational education programs and supports consumer and homemaking education under the special programs title.
CBE	Competency Based Education
CCEM	Comprehensive Career Education Model (statewide project)
CCSU	Community College Services Unit
CE	Career Education
CEC	Council for Exceptional Children
CEM	Consumer Educators of Michigan
CEPD	Career Education Planning District. A CEPD is a group of educational agencies, including K-12 and intermediate school districts and community colleges located in geographical proximity of one another and organized to increase the opportunities for persons to become and remain adequately prepared for life and work. CEPD's provide a delivery system that encourages a comprehensive, cohesive, and well-coordinated career education program (kindergarten-adult) in the State. There are 53 CEPD's in Michigan.
CHE	Consumer Home Economics
CIP	Classification of Instructional Programs. A national Center for Educational Statistics codification system for describing and coding all instructional programs.
CJE	Critical Job Element

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
CMAEYC	Central Michigan Association for the Education of Young Children
COVE	Council of Vocational Educators
CPIC	Career and Placement Information Center
CRC	Career Resource Center
CSR	Contracted Services Request
CSS&M	Contracted Services, Supplies, and Materials. A line item budget account.
DECA	Distributive Education Clubs of America. The official vocational student organization serving distributive education students and instructors. DECA is organized at the secondary, junior collegiate, and collegiate levels.
DIALOGUE	A Lockheed Corporation database retrieval service.
DISADVANTAGED	Persons (other than handicapped) who: 1) have academic or economic disadvantages, and 2) require special services, assistance, or programs in order to enable them to succeed in vocational education programs.
DIVERSIFIED COORDINATOR	A cooperative education coordinator who serves more than one occupational area.
DM&P	Decision Making and Planning
DMB	Department of Management and Budget
DOE	Department of Education
DOL	Department of Labor
DOT	Dictionary of Occupational Titles
DP	Development Plan
ECES	Educational and Career Exploration System. Career Education Project at Genesee I.S.D.
ECIA	Education Consolidation and Improvement Act of 1981. This Act repeals the Elementary and Secondary Education Act (ESEA) of 1965 and is organized into three chapters. Programs under this Act began October 1, 1982. The three chapters are: Chapter 1-provides financial assistance to meet special education needs of disadvantaged children; Chapter 2-consolidates federal programs for elementary and secondary education; and Chapter 3-contains general provisions for compliance.
ECNCC	East Central Network for Curriculum Coordination

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
ECO	Expanding Career Options
EDP	Employability (Educational) Development Plan
ELIGIBLE RECIPIENT	A local educational agency or postsecondary institution.
EPDA	Education Professions Development Act
ERIC	Education Resource Information Center. A computerized and microfiche database for educational products and research reports.
FFA	Future Farmers of America. The official vocational student organization serving agricultural education students and instructors.
FHA-HERO	Future Homemakers of America-Home Economics Related Occupations. The official vocational student organization serving consumer, homemaking, and home economics-wage earning students and instructors.
FTE	Full Time Equated. Usually refers to an instructor's teaching load.
FY	Fiscal Year - July 1 to June 30 for federal programs.
FYE	Fiscal Year Equated
FYES	Full Year Equated Students
GLASSTIE	Great Lakes Association of State Supervisors Trade and Industrial Education
HANDICAPPED	Persons who are mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, or other health impaired persons or persons with specific learning disabilities; who, by reason of their handicap, require special education and related services and cannot succeed in the regular vocational education program without special educational assistance or require a modified vocational education program.
HEEA	Home Economics Education Association
HEGIS	Higher Education General Information Survey
HEMS	Higher Education Management Services. HEMS consists of: Community College Services Unit, Private Occupational Schools Unit, Educational Corporations Unit, Director, and Associate Director.
HERO	Home Economics Related Occupations (co-op)

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
HEW	Health, Education, and Welfare
HOE	Health Occupations Educators
HOSA	Health Occupations Students of America. The official vocational student organization serving students who are enrolled in vocational health occupations programs.
ICB	Interagency Collaborative Body
IDECC	Interstate Distributive Education Curriculum Consortium
IEPC	Individualized Educational Planning Committee. A committee of an operating district or agency whose members shall include, as a minimum, a representative of the administrative, instructional, and diagnostic personnel and parents invited to participate when their children are involved.
ISD	Intermediate School District
IWRP	Individualized Written Rehabilitation Program. Federal regulations require that there be an IWRP for each client served by the Michigan Rehabilitation Services. The purpose of the IWRP, or "rehabilitation plan," is to formally record the vocational goal, intermediate objectives, and the means and timeframe for meeting the goal and objectives agreed upon by the client and MRS counselor.
JTPA	Job Training Partnership Act
KRA	Key Result Area
LEA	Local Educational Agency. Refers to intermediate school districts, local school districts, community colleges, and four year colleges and universities.
LEAD	Labor Employment and Development
LEAP	Local Educational Area Plan
LEP	Persons of Limited English Proficiency, when used in reference to an individual means individuals who were not born in the U.S. or whose native tongue is a language other than English and individuals who came from environments where a language other than English is dominant, and by reason thereof, have difficulties speaking and understanding instructions in English.
LMA	Labor Market Area
LMI	Labor Market Information
LRP	Long Range Planning

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
MAASA	Michigan Association of Area School Administrators
MAASE	Michigan Association for Administrators of Special Education
MAC	Michigan Agricultural Conference
MACE	Michigan Association for Career Education
MACSAP	Michigan Association Concerned with School Age Parents
MADET	Marketing and Distributive Education Teachers (Michigan Association)
MAISA	Michigan Association of Intermediate School Administrators
MAISEA	Michigan Association of Intermediate Special Education Administrators
MANAGER	Michigan Analysis Network and General Evaluation Report
MAPNE	Michigan Association of Practical Nurse Educators
MASA	Michigan Association of School Administrators
MASB	Michigan Association of School Boards
MASC	Michigan Apprenticeship Steering Committee
MASPP	Michigan Association of School Placement Personnel
MASSP	Michigan Association of Secondary School Principals
MATEB	Michigan Association of Teacher Educators for Business
MATVA	Michigan Association of Teachers of Vocational Agriculture
MAVCC	Mid America Vocational Curriculum Consortium
MBEA	Michigan Business Education Association
MBN	Michigan Board of Nursing
MBO	Management by Objective
MCCBOA	Michigan Community College Business Officers Association
MCCFPM	Michigan Community College Financial Planning Model
MCCOEES	Michigan Community College Occupational Education Evaluation System

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
MCITE	Michigan Council of Industrial Teacher Educators
MCVA	Michigan Council of Vocational Administrators
MDE	Michigan Department of Education
MEA	Michigan Education Association
MEATA	Michigan Education Apprenticeship Training Association
MESC	Michigan Employment Security Commission
MESP	Michigan Elementary School Principals
METI	Michigan Employment and Training Institute (JTPA)
MFST	Michigan Food Service Teachers Group
MHEA	Michigan Home Economics Education Association
MHEE	Michigan Home Economics Educators
MHETE	Michigan Home Economics Teacher Educators
MHOE	Michigan Health Occupations Educators
MICROSIFT	A microcomputer software database at the Far West Regional Laboratory
MIES	Michigan Industrial Education Society
MINI-MAXI	A list of equipment developed by V-TES local advisory groups for vocational programs. LEA's make their selection of items from the list for the approved vocational program. The amount requested is determined by their needs and available matching funds. Ideally, the minimum amount is the basis for a minimum program. Maximum amount includes more sophisticated equipment.
MIOSHA	Michigan Occupational Safety and Hazard Act
MIS	Management Information System. An ongoing activity encompassing people, procedures, materials, and equipment coordinated to provide an identified coherent service or end product. A computer may be used.
MISIS	Michigan Student Information System
MJTCC	Michigan Job Training Coordinating Council (JTPA)
MLN	Michigan League of Nursing

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
MLPNA	Michigan Licensed Practical Nurses Association
MO	Monthly Objective
MOA	Methods of Administration
MOCAC	Michigan Occupational Competency Assessment Center
MODAC	Michigan Occupational Deans Administrative Council
MODAS	Michigan Occupational Data Analysis System
MOEA	Michigan Occupational Education Association
MOICC	Michigan Occupational Information Coordinating Committee
MOIS	Michigan Occupational Information System
MOSNA	Michigan Occupational Special Needs Association
MOTEA	Michigan Occupational Teacher Education Association
MPGA	Michigan Personnel and Guidance Association
MRS	Michigan Rehabilitation Services
MTTE	Michigan Trade and Technical Educators
MVCA	Michigan Vocational Coordinators Association
MVCL	Michigan Vocational Curriculum Leaders
MVEIS	Michigan Vocational Education Information System
MVERC	Michigan Vocational Education Resource Center
MVGA	Michigan Vocational Guidance Association
MVOGA	Michigan Vocational/Occupational Guidance Association
MYC	Michigan Youth Corps
NADET	National Association of Distributive Education Teachers
NAPNES	National Association for Practical Nurse Education and Services, Inc.
NASDVE	National Association of State Directors of Vocational Education
NASSTIE	National Association of State Supervisors Trade and Industrial Education
NATIE	National Association for Trade and Industrial Educators, Inc.

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
NCES	National Center for Educational Statistics
NCRVE	National Center for Research in Vocational Education
NCVE	National Council on Vocational Education
NEA	National Education Association
NIE	National Institute of Education
NLN	National League for Nursing
NNCCVTE	National Network for Curriculum Coordination in Vocational-Technical Education
NOCTI	National Occupational Competency Testing Institute
OCR	Office for Civil Rights
OEA	Office Education Association
OFYES	Occupational Full Year Equated Students. Summary credit hours generated in approved occupational courses and dividing that total by 31 for colleges operating on semester schedule, 36 for colleges operating on a trimester schedule, and 46.5 for those operating on a quarter-term schedule.
OJT	On The Job Training
OSOB	Ottawa State Office Building. The Michigan Department of Education is located in the South Tower.
OSP	On Site Planning Model for Achieving Sex Equity in Vocational Education
PA	Personnel Appraisal
PAC	Parent Advisory Council
PACT	Perceptions of Apprenticeship Classroom Training
PARAPROFESSIONAL	Vocational education paraprofessionals are non-certified aides assigned to vocational education teachers.
PBES	Program Budgeting Evaluation System (State). The Governor's plan to develop management and control processes to produce a program for ALL departments: 1. PRR - Program Revision Requests for budget increases exceeding \$75,000. 2. CPR - Current Program Revision for requests for budget increases for less than \$75,000.

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
PEER	Project on Equal Education Rights
PHASE	Program to run for three years, use the term Phase I for the first year, Phase II for the second year, and Phase III for the final year.
PI	Public Information Program on Expanding Vocational Options
PIC	Private Industry Council
PO	Performance Objective. A description of what a student should be able to do upon successful completion of a lesson, course, or program. Each PO should consist of: 1. What the student should be able to do (performance) - should be stated in terms of observable behavior. 2. Criteria - how well the student should be able to do it (% accuracy). 3. Conditions - under what conditions the student should be expected to perform the task.
PPA	Program for Personnel Appraisal
PPBS	Planning, Programming, and Budgeting System. A synthesis of established techniques that are applied to the management and control processes to produce a program budget.
PR	Public Relations
PREP	Program Review Extension Procedures
PROE	Program Review in Occupational Education
PROGRAM	Secondary, postsecondary, or adult program of studies designed primarily to prepare pupils for entrance into a specific occupation or cluster of occupations.
PROJECTS	Career development and/or vocational education activities which must be applied for annually.
PRP	Program Review and Planning
PRR	Program Revision Request
PY	Program Year (federal programs)
QUIK START	The Vocational Education Quik Start Job Training Program supports the formation of a unique partnership between business/industry, labor, education, and government to train and retrain workers.

TERM/ACRONYMDEFINITION

REFERENCE GUIDE

The Reference Guide is designed to assist local educational agencies in the design, development, implementation, operation, and administration of vocational-technical education programs in Michigan. All aspects of this document are designed to concur with the Michigan State Plan for Vocational Education, as well as the Michigan School Code, and subsequent administrative rules and regulations as promulgated by the State Board of Education. The intent is to state, in specific terms, those operational details which should be followed by local educational agencies desiring State and federal financial assistance for approved vocational-technical education programs.

REMC

Regional Educational Media Center

RFP

Request for Proposals

SA&A

Self Awareness and Assessment. Students learn about themselves as physical, intellectual, and emotional beings, and discover who they are and what their capabilities, strengths, and weaknesses are.

SACVE

State Advisory Council for Vocational Education

SBE

State Board of Education

SCHOOL YEAR

July 1 through June 30

SDA

Service Delivery Area (JTPA)

SECONDARY TAXONOMY

Listing of secondary programs - X0109

SECRETARY

U. S. Secretary of Education

SERVICE AREAS

Major divisions in the Michigan Department of Education of which the Vocational-Technical Education Service is one.

SES

Special Education Supervisors

SEV

State Equalized Valuation

SHARED TIME PROGRAMS

Occupational programs which are planned jointly by all interested K-12 districts within a CEPD and are designed to assure an equitable opportunity for participation in the program by each interested K-12 district. The programs are housed in the operating district's facility and the other participating districts transport students to those facilities.

SIC

Standard Industrial Classification

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
SLC	State Leadership Conference. The annual meeting of the six vocational student organizations, including the election of state officers, state contests, leadership workshops, career exhibits, etc. Also called state conventions or career development conferences.
SMSA	Standard Metropolitan Statistical Area. Central cities and surrounding areas - Ann Arbor, Bay City, Detroit, Flint, Grand Rapids, Jackson, Kalamazoo, Lansing, Muskegon-Muskegon Heights, and Saginaw.
SOCAT	Student Occupational Competency Assessment Test
SOP	Standard of Performance
SOP	Standard Operating Procedure
SPECIAL NEEDS SUPPORT TEACHER	A special needs support teacher must be certified in at least one of the following areas: vocational education, special education, rehabilitation, reading, or math.
STATE PLAN	Refers to the State Plan for Vocational Education in Michigan. This plan is submitted to the U.S. Department of Education by the State Board of Education pursuant to Public Law 98-524 and regulations in order for Michigan to be eligible to receive federal vocational education funds.
STRIC	State Technical Institute and Rehabilitation Center
STUDENT ADVOCATE	A person who seeks to assist special needs students in becoming an integral part of the school community by interpreting the demands and expectations that each have for the other. The advocate is utilized only in conjunction with a technical assistant.
TA	Technical Assistance. Assistance given to LEA's on program development, planning, and OCR compliance.
TAXONOMY	List of community college occupational courses.
TELENET	A telecommunications network for computer users.
TOUCHE ROSS	Accounting and general consulting firm engaged by the Department of Education on contract to recommend a financial and programmatic assessment system for the Vocational-Technical Education Service.

TERM/ACRONYMDEFINITION

UNIT

The Vocational-Technical Education Service consists of two program areas and four units. These are as follows:

PROGRAM PLANNING AND DEVELOPMENT - William Weisgerber
Chief

PROGRAM DEVELOPMENT AND OPERATION UNIT
Robert Pangman, Supervisor

VOCATIONAL GUIDANCE UNIT
Joseph McGarvey, Supervisor

FINANCE, DATA MANAGEMENT AND SPECIAL PROGRAMS
(vacant), Chief

PLANNING, EVALUATION AND FINANCE UNIT
Richard Shupe, Supervisor

SPECIAL POPULATIONS PROGRAM AND SERVICES UNIT
Robert Kennon, Supervisor

USDOE

United States Department of Education

USDOL

United States Department of Labor

VEA '68/'76

Vocational Education Amendments of 1968/1976

VEALDP

Vocational Education Administrator Leadership Development Program

VECM

Vocational Education Curriculum Materials. A curriculum database at the NCRVE and available through BRS.

VEDS

Vocational Education Data System

VEDS-MICRO

VEDS Micro Computer Database Management System

VEISS

Vocational Education Information Support System. A data processing system used by V-TES. Raw data is collected for four files: facility, student, staff, and program-course section. This data can then be manipulated to provide greater flexibility and relevance of output.

VEPDP

Vocational Education Personnel Development Project

VICA

Vocational Industrial Clubs of America. The official vocational student organization serving trade, industrial, and technical students and instructors.

VOB

Vocational Office Block

<u>TERM/ACRONYM</u>	<u>DEFINITION</u>
VPO	Vocational Preparation and Occupations. A handbook developed by the USDOL which lists characteristics of each DOT occupation. Characteristics listed include General Educational Development, Specific Vocational Preparation, Physical Demand, Working Conditions, Aptitudes, Interests, and Temperments.
VSO	Vocational Student Organization. The six organizations sponsored by the Michigan Department of Education and the United States Department of Education for vocational education students. These organizations serve to motivate students, vitalize instruction, and assist in the accomplishment of vocational education goals. These organizations are: BOEC, DECA, FFA, FHA-HERO, HOSA, and VICA.
VTECS	Vocational Technical Education Consortium of States
VTEIR	Vocational Teacher Education Institutional Representatives
VTES	Vocational-Technical Education Service. One of the service areas within the Michigan Department of Education.
WICHE	Western Interstate Commission on Higher Education

TAB II

Program Development and Operation

VOCATIONAL-TECHNICAL EDUCATION PROGRAMS

Students vary in background, ability and aspirations. A wide variety of educational approaches is needed to accommodate those differences. Rapid societal and technological changes present those in education with a continuing challenge to better prepare both college and non-college bound students for living and working during and after completing school. As a result, Vocational-Technical Education continues to be a significant part of the total education process.

Vocational-Technical Education programs are of three (3) types: Wage-earning, Consumer Home Economics and Industrial Arts/Technology Education. Wage-earning programs represent that component of vocational-technical education designed to assist persons to prepare for and obtain employment consistent with their interest and abilities and the needs of employers. Such employment may occur following completion of the high school program or upon completion of a related post-secondary technical program. The purpose of Consumer Home Economics is to prepare students for the challenges of family life, careers and consumer management. Michigan's new middle/junior high school curricula "Skills for Living" and the high school curricula "Skills for Managing Life" are based on a human development philosophy for meeting the life skill needs of youth and adults. Industrial Arts/Technology Education programs are those which pertain to subject matter or related courses organized for the development of understanding about all aspects of industry and technology, including learning activities such as experimenting, designing, constructing, evaluating and using tools, machines, materials and processes. These programs also assist individuals in making informed and meaningful occupational choices or prepare them for entry into advanced trade and industrial or technical education programs.

The Vocational-Technical Education Service endorses the Competency-Based Education (CBE) format for the development and implementation of curriculum in Vocational Education. This concept provides for a management system which structures and organizes the curriculum content leading to an approved delivery system. The final outcome is a communication device which assists students in progressing in job preparation knowledgeable of the expectation for reaching job proficiency. It also assists students in planning and progressing toward setting and reaching career goals. Students then become more in control of their own destiny, instructors have a plan from which to teach and a record of student accomplishment can be maintained which can be used by potential employers to hire students for a job that meets their highest functional level. A Competency-Based Vocational Education system is based on Tasks and reflects the skills, knowledge

and attitudes that employers expect incumbent workers to possess. A Competency-Based Education system contains a series of interrelated components: Program Goals/Competencies, Objectives/Tasks, Performance Tasks, Learning Activities and Evaluation.

Technical assistance in developing competency based vocational education programs may be requested from the Michigan Department of Education Vocational-Technical Education Service, Program Development and Operation Unit, P. O. Box 30009, Lansing, Michigan 48909, telephone (517) 373-3365.

AGRICULTURE EDUCATION

I. DEFINITION

Agriculture education consists of a group of related courses or units of subject matter which are organized into instructional programs to provide opportunities for students to prepare for or advance in occupations requiring knowledge and skills in agriculture. The areas of production agriculture, agricultural supplies, agricultural mechanization, horticulture, forestry, agricultural resources and the services related thereto are emphasized in the instructional program. An agricultural occupation may require skills in only one area or in a combination of areas.

II. OBJECTIVE

The objective of agriculture education is to provide instruction and practical experiences which will prepare students for entry into one or more agricultural occupation areas.

III. INSTRUCTIONAL CONTENT

The two major areas of emphasis are:

- A) Production Agriculture is that body of Vocational Education dealing with instruction and practical experiences which are concerned with the principles and processes involved in the planning related to and the economic use of facilities, land, water, machinery, chemicals, finance and labor in producing plant and animal products.
- B) Off-farm Agriculture is that body of Vocational Education dealing with instruction and planned practical experiences organized into instructional programs designed to develop understanding, abilities and competencies needed for entry into business, industry, agencies, organizations or services which are directly related to agricultural processing, distributing and servicing. Only persons who require knowledge and skills in agricultural subjects to satisfactorily perform their responsibilities are considered employed in off-farm agricultural occupations.

IV. INSTRUCTIONAL PROGRAMS

A. Production Agriculture

<u>CIP Code</u>	<u>Program Description</u>
01.0301	<u>Production Agriculture.</u> An instructional program comprised of a series of courses that prepare individuals for planning and economically using facilities, land, water, machinery, chemicals, finance, and labor in the production of plant and animal products.
Course 01	<u>Animal Science.</u> Planned learning experiences which are concerned with the study and operations dealing with theories, principles, and practices involved in producing (breeding, feeding, care, and housing) animals and animal products for economic and other uses.
Course 02	<u>Plant Science.</u> Planned learning experiences which are concerned with the study and operations dealing with principles and practices involved in the culture and production of agricultural plants.
Course 03	<u>Soil Management.</u> A combination of subject matter and practical experiences designed to develop knowledge and skills concerned with surveying and classifying soils; determining cropping systems and fertilizer; conditioning and cultural practices that will result in efficient agricultural production.
Course 04	<u>Farm Business Management.</u> Planned learning activities which are concerned with farm resource analysis, accounting, production, financing, resource acquisition, purchasing, farm inputs, performance records, contracts, farm marketing and maintenance. The results of these learning activities are applied to formulating decisions involved in managing a farm or ranch operation.

Course 05 Farm Mechanics. A combination of subject matter and activities designed to develop abilities necessary for assisting with and/or performing the common and important operations or processes concerned with the selection, operation, maintenance, and use of agricultural machinery and equipment, structures and utilities; selection, safe use, and maintenance of hand and power tools; and arc and acetylene welding.

Course 06 Agricultural Supplies and Services. A combination of subject matter and learning experiences which prepares individuals to sell supplies for agricultural production; provide agricultural services; and purchase, grade, store, market, and transport agricultural products.

B. Off-Farm Agriculture

<u>CIP Code</u>	<u>Program Description</u>
01.0201	<u>Agricultural Mechanics.</u> An instructional program that prepares individuals to select, operate, maintain, service, sell, and use agriculture/agribusiness power units, machinery, equipment, structures, and utilities. Includes instruction in agricultural power units; the planning and selection of materials for the construction of agricultural facilities.
Course 01	<u>Agricultural Mechanics.</u> A combination of subject matter and experiences that prepares individuals in a general way to select, operate, maintain, service, sell, and use agriculture/agribusiness power units, machinery, equipment, structures, and utilities. Includes instruction in agricultural power units; the planning and selection of materials for the construction of agricultural facilities; and the mechanical practices associated with irrigation, drainage, run-off, water conservation, and erosion control.

<u>CIP Code</u>	<u>Program Description</u>
01.0201 (Cont.)	Course 02 <u>Agricultural Power Machinery.</u> A combination of subject matter and experiences that prepares individuals to select, operate, service, maintain, and repair a variety of agricultural power units and agricultural machinery and equipment. Includes instruction in gas, diesel, and electric units; welding; refrigeration; and hydraulics and other power systems.
01.0601	<u>Horticulture.</u> An instructional program that prepares individuals to produce, process, and market plants, shrubs, and trees used principally for ornamental, recreation, and aesthetic purposes and to establish, maintain, and manage horticultural enterprises such as arboriculture, floriculture, greenhouse operation and management, landscaping, nursery operation and management, and turf management. Includes instruction in machinery and equipment necessary for each horticultural enterprise. The program may consist of the following courses: Course 01 <u>Horticulture.</u> A combination of subject matter and practical experiences that generally prepares individuals to produce, process, and market plants, shrubs, and trees used principally for ornamental, recreational, and aesthetic purposes and to establish, maintain and manage horticultural enterprises such as arboriculture, floriculture, greenhouse operation and management, landscaping, nursery operation and management, and turf management. Includes instruction in machinery and equipment necessary for each horticultural enterprise. Course 02 <u>Floriculture.</u> A combination of subject matter and experiences that prepares individuals to produce flowers, foliage, and related plant materials in fields and greenhouses for ornamental purposes, and to arrange, package, and market these materials.

<u>CIP Code</u>	<u>Program Description</u>
01.0601 (Cont.)	Course 03 <u>Greenhouse Operation and Management.</u> A combination of subject matter and experiences that prepares individuals to produce plants under glass and in other artificial environments. Course 04 <u>Landscaping.</u> A combination of subject matter and experiences that prepares individuals to locate, plant, and maintain turf, plants, shrubs, or devices for the beautification of home grounds and other areas of human habitation and recreation.
03.0101	<u>Renewable Natural Resources.</u> An instructional program concerned with the principles and processes involved in the conservation and/or improvement of natural resources such as air, forests, soil, water, fish, plants, and wildlife for economic and recreational purposes. Instruction also emphasizes such factors as the establishment, management, and operation of forest lands for recreational purposes. The program may consist of the following courses: Course 01 <u>Renewable Natural Resources.</u> A combination of subject matter and experiences that generally prepares individuals for activities involving the conservation and/or improvement of natural resources such as air, soil, water, land, fish, and wildlife for economic and recreational purposes. Course 02 <u>Forestry Production and Processing.</u> A combination of subject matter and experiences that prepares individuals in a general way to produce, protect, and manage timber and specialty forest crops, maintain, operate, and repair related equipment and machinery; harvest and transport trees as a crop and select, grade, and market forest raw materials for converting into a variety of consumer goods, and to utilize the forest for multiple purposes such as game preserves and recreation.

V. SPECIAL CONDITIONS

A) Production Agriculture - 01.0301

1. Classes/Courses

Production Agriculture programs may be offered through single class periods or block-time (two or more consecutive periods) at least one semester in length. Programs will include four classes/courses as follows: 01-Animal Science, 02-Plant Science, 03-Soil Management, and 04-Farm Business Management. If facilities are available, LEA's are strongly encouraged to include one class of 05-Farm Mechanics. Area centers are also encouraged to offer this class.

2. Supervised Occupational Experience (SOE)

A supervised occupational experience program in addition to the above classes should be a part of the instruction. Students will have a planned SOE at the home farm or they can be placed on a farm. The agriculture teacher is expected to supervise the SOE. Students will not necessarily have to be released from school for SOE since their work time could include after school hours, weekends, and summers. There may be instances when a student is placed on an SOE in an off-farm business if the job requires agricultural production skills and knowledges. In such instances, either the agriculture teacher or the co-op coordinator may coordinate the student's SOE. Cooperative education guidelines may not apply to production agriculture programs.

3. Funding Conditions

CIP Code 01.0301, Production Agriculture programs are not eligible to receive State aid added cost funding for co-op. The community is the laboratory for this CIP Code and student's SOE supervision is considered an integral part of the total program. Supervision of SOE's conducted in the summer is also an integral part of the program. Thus, the State aid added cost funding for the regular school year enrollments includes time assigned for SOE supervision during the school year and accordingly, the summer component is required.

4. SOE Summer Program

The required length of time teachers are employed on an extended or summer program is dependent on the number of students served during the regular school year.

- a) Teachers devoting 66% or more of their time to agriculture education during the school year have sufficient numbers of students to justify full-time employment during the summer months. Such teachers should, therefore, be employed for a minimum of 48 weeks per year.
- b) Teachers devoting less than two-thirds of their time to agriculture education during the school year may be hired on the same percentage of time during the summer months. Schools hiring teachers on this basis may determine the work schedule in a variety of ways; such as:
 - (1) A block of time each week equivalent to the fraction of time employed.
 - (2) A fractional part of each day.
 - (3) Alternate weeks on a full-time basis.
 - (4) A different time schedule which will assure that the time will be available at opportune times.
 - (5) Under certain unusual conditions where circumstances so justify, a summer program may not be necessary. Reimbursement of the program under those conditions must have prior approval of the Michigan Department of Education. Such approval will be reviewed annually.
- c) All teachers shall complete a plan for their summer program of activities and submit it to the appropriate local administrator.

5. Community Facilities

The community can serve as the laboratory for many educational activities and learning experiences. Land laboratories owned or rented by the LEA can provide many "hands on" experiences. In addition, field trips to area farms can provide educational opportunities that would otherwise be too costly or difficult to simulate in the classroom.

6. Instructional Methods

a) Skill Development Courses

Courses designed to develop fundamental skills and competencies that prepare students for agricultural occupations.

b) Supervised Occupational Experience (SOE)

SOE programs allow students to learn skills through hands on experiences outside of the classroom. These experiences include one or more of the following:

- (1) Farming experiences on the student's home farm.
- (2) Placed on a farm (other than home farm) for farming experience.
- (3) Placed for experience in other situations where food and fiber are produced.
- (4) Placed in an agricultural business which requires agricultural knowledge and skills for the delivery of services.

c) Laboratory Experience

Laboratory activities designed to develop competencies needed for employment may, in certain cases, be substituted for actual on-the-job experience. In situations where this is the case, specialized laboratory facilities must be provided by the LEA. They may be either owned or rented. The kind of facilities will be determined by the program offered. Most LEA's should provide a land laboratory suitable for producing crops and raising plants.

B) Off-Farm Agriculture Programs

1. Programs/Block Time

CIP Codes and programs 01.0201, Agricultural Mechanics; 01.0601, Horticulture; and 03.0101, Renewable Natural Resources are all considered off-farm agricultural programs. These programs can best be taught at the 11th and 12th grade with block-time programs (two or more consecutive class periods). It is important for the student to have sufficient time to accomplish the tasks for each CIP Code. These programs should use the co-op technique during the second year of the program to provide additional non-class experiences.

2. AG.0000 Agricultural Co-op

Co-op should be considered an important part of the instructional program for students preparing for off-farm occupations. In addition to co-op experience during the school year, it is suggested that students be placed on

co-op during the summer between the 11th and 12th grade. Placement should be in businesses that can provide experiences directly related to the student's occupational goal.

3. Teacher Employment

Teachers of off-farm agriculture programs may be employed on a school year basis provided the competencies needed by students for employment are developed through laboratory courses and/or arrangements are made for supervision of those students placed on co-op during the summer.

4. Instructional Methods

a) Skill Development Courses

Courses designed to develop fundamental skills and competencies that prepare students for off-farm agricultural occupations.

b) Laboratory Experiences

Laboratory courses designed to develop competencies needed for employment in off-farm agriculture occupations may, in certain cases, be substituted for actual on-the-job experiences. In situations where this is the case, specialized laboratory facilities must be provided by the local educational agency. They may be either owned or rented. The kind of facilities will be determined by the program offered. Most LEA's should provide a land laboratory suitable for raising nursery plants, a small forest or producing crops. In addition, those LEA's planning programs in greenhouse operation and management and agricultural mechanics should provide the necessary greenhouse or shop facilities. Horticulture programs may also require additional outdoor and/or community facilities.

VI. ADVISORY COMMITTEES

All state approved vocational education programs are required to make use of an occupational or craft advisory committee composed primarily of persons from business, industry, and labor knowledgeable in that specialized occupational area. Craft advisory committees can help provide assistance in the development, promotion, operation, evaluation, and maintenance of vocational education programs. Craft advisory committees may be established to serve an occupational program or closely related cluster of programs on a building, district, multi-district, or CEPD arrangement. Local conditions will dictate the most effective and efficient structure to

establish. Additional information regarding advisory committees can be found in Tab II, Section I of the Administrative Guide for Vocational-Technical Education in Michigan.

VII. TEACHER CERTIFICATION

All persons teaching a state approved vocational education program are required to be vocationally certified. The Michigan Department of Education publication entitled, "Administrative Manual - Vocational Teacher Certification", provides detailed information concerning vocational certification requirements. This document may be obtained by writing to the Michigan Department of Education Teacher Preparation and Certification Service, P. O. Box 30008, Lansing, Michigan, 48909, telephone (517) 373-3310. Questions pertaining to vocational certification should be directed to the above address or phone number.

VIII. FACILITIES AND EQUIPMENT

A) Facilities

The following ranges for square feet per pupil in each CIP Code reflect the space needs for educational activities in a traditional program. Caution: If you are pursuing an innovative approach in any one of these CIP Codes, it may require either lighter or heavier space allocations. For additional information for planning facilities, please refer to the School Plant Planning Handbook, Bulletin 412 supplement found in Tab II Section O of the Administrative Guide for Vocational-Technical Education. If additional assistance is needed, it may be obtained by contacting the Vocational-Technical Education Service.

AGRICULTURE

<u>CIP Code</u>	<u>Descriptor</u>	<u>Lab Type</u>	<u>Square Foot/Range</u>	
			<u>Minimum</u>	<u>Optimum</u>
01.0301*	Production Agriculture	Light	50	65
01.0201	Agricultural Mechanics	Extra Heavy	180	200
01.0601*	Ornamental Horticulture	Medium	50**	100
03.0101*	Renewable Natural Resources	Heavy	130	150

*These areas will need additional outdoor and/or community facilities to supplement the indoor school facilities.

**Additional greenhouse space also required, minimum of 1,700 sq. ft.

B) Equipment

Equipment reflective of agriculture education occupations is needed for all programs. Annually, V-TES prepares and updates the "Instructional Tools and Equipment List" which contains a listing of equipment needed to successfully operate an agriculture education program. Caution: These lists are updated in June and carry the current year edition date. These lists are available from the Michigan Vocational Education Resource Center, 133 Erickson Hall, Michigan State University, East Lansing, Michigan 48824. Michigan toll free telephone number: 1-800-292-1606.

IX. CLASS TIME

The following table reflects the required class times for each program:

<u>CIP Code</u>	<u>Program</u>	<u>Required Class Periods</u>
01.0301	Production Agriculture	One or more
01.0201	Agricultural Mechanics	Two consecutive
01.0601	Horticulture	Two consecutive
03.0101	Renewable Natural Resources	Two consecutive

X. COOPERATIVE EDUCATION

Cooperative education is a method of instruction that combines work-related learning experiences available in the community with vocational instruction provided in an educational institution.

The essential elements of cooperative education programs include:

- A) Alternate or parallel periods of instruction in school and supervised public or private employment.
- B) A written training agreement among the school, an employer, and a student.
- C) Vocational instruction (including required academic instruction) related to the job and the student's academic study or career goals.

- D) Carefully planned alternation of study and work supervised to further the student's education and employability.
- E) The student's employment and compensation in compliance with federal, state, and local laws.

For more information see Tab II Section J of the Administrative Guide for Vocational-Technical Education in Michigan.

XI. VOCATIONAL STUDENT ORGANIZATIONS

A vocational student organization is an integral part of a high quality agriculture education program. All programs are encouraged to operate Future Farmers of America (FFA) chapters as an intra-curricular component.

A) The purposes of FFA are as follows:

1. To encourage the development of occupational skills, knowledges, and abilities to a high level of proficiency.
2. To develop leadership ability through participation in educational, vocational, civic, recreational, and social activities.
3. To develop character and to prepare members for useful citizenship and foster patriotism.
4. To motivate students and vitalize the instructional program.
5. To develop and strengthen the confidence of young people in themselves and their work.
6. To unite in a common bond without regard to race, creed, or national origin, students with similar career objectives.
7. To assist students in refining their career objectives through realistic training.
8. To develop a sense of social acceptability and individual responsibility toward the home and community.
9. To encourage scholastic improvement and school loyalty.
10. To foster a deep respect for the dignity of all work.

B) There are many benefits to the students, teachers, schools and communities who participate in the student organizations.

1. Benefits to Students:

- a) Provides incentives to improve personal and occupational skills.
- b) Provides career awareness and exploration activities.
- c) Provides leadership development opportunities.
- d) Provides activities to develop civic understanding and responsibility.
- e) Provides an opportunity to meet with business, industry, and agricultural leaders and students with similar backgrounds and career interests.

2. Benefits to Teachers:

- a) Motivates students.
- b) Publicizes the vocational program.
- c) Provides opportunities to meet and work with vocational teachers in the same occupational area.
- d) Provides an established recognition program with awards for student achievement.
- e) Provides opportunities to meet and work with leaders in agriculture, business, and education.

3. Benefits to School/Community:

- a) Publicizes the school and community.
- b) Creates school spirit.
- c) Develops pride in school and community.
- d) Provides students with leadership skills for future leadership positions.
- e) Involves students in community service activities.
- f) Students are better trained to enter the work force.

C) Experiences and Opportunities for FFA Members

FFA members learn to be both leaders and followers. They learn how to plan activities, carry out activities, to participate in cooperative experiences, to preside at meetings, to serve as chairpersons for committees, to manage finances, to get group consensus for decision making, and most importantly, to acquire the realization of compromise for the good the majority -- a trait often needed on the job.

Being successful in a vocation often takes more than occupational skills. It also takes social understanding of human relations. Human relations is difficult to teach in the classroom. Students need experiences in social settings to acquire the social intelligence needed to succeed in their jobs. Through FFA conferences, workshops, and leadership and skill contests, students increase their sense of belonging and ability to adjust, and increase their positive personality traits.

FFA provides involvement and experiences with the community. Students can help to improve their community, learn to acknowledge the rights of others and develop useful citizenship habits by their involvement in community activities.

Through the leadership and Ag Skills contests, students receive motivation and recognition for their accomplishments. Competitions are conducted at the local, district, regional, state, and national levels and are directly related to the vocational education programs in which the students are enrolled. Contests are hands-on experiences with evaluation and judging done by agriculture leaders with knowledge and experience in that area.

D) Operational Structure for FFA

The local chapter is the foundation for the organization. Chapters are organized in the local high school or area vocational center based on the school's agricultural education program. The vocational agriculture education teacher serves as the advisor for the local chapter. Local chapters elect student officers: President, Vice President, Secretary, Treasurer, Reporter, and Sentinel to lead the local chapter.

FFA also has a district and regional structure within the State which provides geographical boundaries for leadership meetings and contests. There are 30 districts and eight regions that make up the State association which serves as the organization that coordinates, communicates, and plans activities. At the State level, students are also elected to office (President, Vice President, Secretary, Treasurer, Reporter, Sentinel, and eight Regional Vice Presidents) each year and their function is to plan and lead regional and State activities.

On the National level, Michigan FFA is affiliated with the National Future Farmers of America. National FFA provides materials for the various state organizations and plans and conducts a national conference for FFA members and advisors.

FFA has a teacher/advisor committee that provides direction for the State organization. This State advisory committee is comprised of one teacher/advisor from each FFA region.

E) Finances

In order for students and advisors to be considered members of FFA they must pay annual membership dues. Generally, there are dues at the local, state, and national levels. The amount of the local dues is set at the local level while the State dues (\$2.25) and national dues (\$3.00) are set by the respective levels. Payment of dues can be the responsibility of each student or they can be paid by the local chapter through fund raising, school contributions, support from agriculture organizations, business, and industry.

Costs to attend district, regional, State, and national conferences and activities are the responsibility of the local chapter. These costs are generally paid from revenue earned through fund raising activities. There are many fund raising activities that can relate to the vocational program and, therefore, serve as a fund raiser as well as an educational activity.

Vocational education State aid added cost funds can be used to pay for teacher/advisor expenses (mileage, meals, lodging, etc.) to attend regional/State/national conferences and activities. These added cost funds cannot be used for student expenses. However, local districts may elect to pay all student expenses out of their general fund revenues.

F. Technical Assistance

The State Board of Education has approved funding for a project at Michigan State University to provide the leadership for the operation of the Michigan FFA organization. Michigan State University's responsibilities are to prepare and distribute materials, plan conferences, plan and conduct contests, communicate with chapters, provide advisor inservice, etc.

For information about FFA contact:

Mr. Gerald Centers
FFA Project Director
100 Wills House
Michigan State University
East Lansing, MI 48824

(517) 353-9221

OR Mr. Charles Arensmeier
Consultant
Vocational-Technical
Education Service
P. O. Box 30009
Lansing, MI 48909

(517) 335-0361

XI. REFERENCES

The following documents are available from the Michigan Vocational Education Resource Center, 133 Erickson Hall, Michigan State University, East Lansing, Michigan, 48824. Michigan toll free phone number: 1-800-292-1606.

- A) "The Crops Curriculum Guide"
- B) "The Farm Business Management Curriculum Guide"
- C) "The Farm Mechanics Curriculum Guide"
- D) "The Soils Curriculum Guide"
- E) "The Beef Curriculum Guide"
- F) "The Swine Curriculum Guide"
- G) "The Dairy Curriculum Guide"
- H) "The Poultry Curriculum Guide"
- I) "The Sheep Curriculum Guide"
- J) "The Greenhouse Curriculum Guide"
- K) "The Landscaping Curriculum Guide"
- L) "The Floriculture Curriculum Guide"
- M) "The Vocational Cooperative Education Handbook"

- XII. For additional information contact: Richard Karelse, Consultant, Michigan Department of Education, Vocational-Technical Education Service, P. O. Box 30009, Lansing, Michigan, 48909, telephone: (517) 335-0378

BUSINESS AND OFFICE EDUCATION

I. DEFINITION

Business and Office Education consists of courses and practical experiences organized into programs of instruction to provide opportunities for students to prepare for or advance in selected business/office occupations.

These programs should prepare students for both gainful employment in business and office occupations and for advanced training in post high school programs.

II. OBJECTIVES

The major objectives of Business and Office Education are:

- A) To develop knowledge, attitudes, and skills in preparation for gainful and meaningful occupations, including new and emerging occupations.
- B) To encourage advancement toward highly skilled and technical occupations and careers.
- C) To provide for students the best and most meaningful experiences in learning and acquiring jobs in business and office occupations.

III. INSTRUCTIONAL CONTENT

The instructional method for Business and Office Education is designed to provide planned educational experiences which lead to employment level competency in the business/office occupation selected by the student. The instructional approaches shall include:

- A) Skills Development: Classes are designed to present and develop skills, to build procedural techniques, and to intensify accuracy. Emphasis is placed on activities to insure the development of a competency level necessary for advanced instruction in the selected career choice.
- B) Simulated Laboratory Instruction: Emphasis is placed on decision-making exercises in understanding and applying a relatively large number of concepts and processes indigenous to business/office occupations. The simulated laboratory affords

increased opportunity for the consolidation, maintenance, enhancement and application of the student's knowledges, skills, and decision-making capabilities.

- C) Cooperative Education: The cooperative work experience technique provides opportunities for the student to expand his/her understanding of a chosen career. These experiences are extremely valuable to the student's overall training and must be implemented in conjunction with related classroom instruction and in compliance with state guidelines. Utilization of the cooperative work experience technique is strongly encouraged as a capstone in preparing the student to enter the world of work. See Tab II Section J for further information.

IV. INSTRUCTIONAL PROGRAMS

CIP Code Program Description

- 07.0101 Accounting and Computing. Approved programs in accounting and computing prepare students for occupations within the accounting field. These programs should include preparation for the following occupations: Inventory Clerk, Payroll Clerk, Cost Clerk, Bookkeeper I, Bookkeeper II, General Ledger Bookkeeper, Accounting Clerk, Insurance Clerk II, Account Information Clerk, Credit Clerk, Classification Control Clerk, Invoice Clerk, Billing Control Clerk, and Audit Clerk. Teller training should also be available through this program. This program has a strong emphasis on computerized accounting procedures. Computerized procedures are integrated into the program's curriculum and reflect the tasks performed by the different occupations. Accounting and computing activities are conducted through on-line terminals, mini-systems, and/or microcomputers.
- 07.0301 Business Data Processing. Approved programs in business data processing train students for various occupations within the field of data processing. The business data processing program is a comprehensive program area of data entry, computer operations, and computer programming. Students have access to acquiring an employable skill in one or more of these areas.
- 07.0601 Secretarial and Related Programs. This instructional program prepares individuals to record and transcribe communications, to provide administrative support, and to abstract, classify, and file information. Word processing skills shall be an integral part of the instructional program for all clerical/secretarial business education students. The program will accommodate students

who are interested in pursuing the following occupations: Executive Secretary (Administrative Assistant); Legal Secretary; Medical Secretary/Medical Assistant; Stenographer (Communications Specialist); Clerk Typist, Typist, Correspondence Clerk; General Office Clerk; Mail and Order Clerk; Receptionist and Communications System Operator; Shipping, Receiving, and Stock Clerk; Traffic, Rate, and Transportation Clerk; and Word Processing Specialist.

Advanced secretarial students, who complete their instructional activities and skills before the instructional year terminates, may filter into other vocational programs to acquire additional skills which enhance their employability. Skills could be acquired, for example, in a Graphic Arts program in such occupations as forms designer, keyboard operator, keyliner, offset press operator, and proofreader.

Course 01 Stenography Laboratory. This instructional program prepares students for occupations concerned with minor administrative and general office duties in addition to taking and transcribing dictation. Course 01 will prepare students for secretarial occupations which require stenography to be used on the job or where stenography is a prerequisite for employment or promotion. The stenographic block will provide instruction for complex shorthand outlines and speed development. In addition, the following skills will also be taught: advanced typewriting, word processing concepts and skills; business spelling; business mathematics; English composition and grammar skills; electronic business machine skills; machine dictation and transcription; reprographics; mail techniques including electronic mail concepts; filing methods including micrographic concepts; telephone techniques; human relations skills; and employability skills. A prerequisite of one year of stenography is a recommendation for entry into the stenographic block.

Course 02 Clerical Laboratory. This instructional program prepares students for occupations concerned with general office duties. Heavy emphasis will be placed on spelling, grammar skills, and machine dictation. All of the skills taught in the Stenography Laboratory will be taught in the Clerical Laboratory with the exception of stenography. A prerequisite of one year of typewriting is a recommendation.

Course 03 Legal Secretarial Laboratory. This instructional program prepares students to transcribe, from shorthand notes and/or machine dictation into typewritten mailable format, legal papers and correspondence such as summonses, complaints, motions, and subpoenas. The students will learn to keyboard, input, edit, and revise legal documents and correspondence utilizing word processing equipment. The student will perform secretarial duties utilizing a knowledge of legal terminology and legal procedures. The student will become familiar with law journals and legal publications. A prerequisite of one year of typewriting and stenography is recommended.

Course 04 Medical Secretarial / Medical Assisting Laboratory. This instructional program prepares students to perform secretarial, clinical, and laboratory duties in a medical office or other health care facility. Students will utilize medical terminology; learn hospital, clinical, or laboratory procedures; and understand legal and insurance forms. The student takes dictation in shorthand or uses a transcribing machine; and, compiles and records medical charts, case histories, reports, and correspondence into typewritten mailable format. The student will learn to keyboard, input, edit, and revise medical records and correspondence utilizing word processing equipment. A prerequisite of one year of typewriting and stenography is recommended.

Course 05 Combination Laboratory. This instructional program will be designated for those programs operating as a combination of two or more of the above courses.

07.9999 Business and Office Cluster. Approved programs in the Business and Office Cluster are a combination of the following programs: 07.0101, Accounting and Computing; 07.0301, Business Data Processing; and, 07.0601, Secretarial Programs. The "cluster" concept is a comprehensive delivery system for providing students with access to acquiring an employable skill in one or more occupation(s) within the broad field of business and office. Programs under the cluster code include a comprehensive career development component. The "cluster" concept requires many

changes in traditional program development and delivery. Modifications in facilities and curriculum are usually required.

Co-op Related Instruction. This course is to be used with any CIP Code program in business and office education. Course 99 is to be used in reporting those students who are in a one hour co-op related instruction.

Course 99 Co-op Related. This instructional program provides the "related class" activities for those students who have previously completed or are currently enrolled in a State approved vocational business block program and are participating in a co-op training assignment in business/industry.

V. ADVISORY COMMITTEES

All state approved vocational education programs are required to make use of an occupational or draft advisory committee composed primarily of persons from business, industry, and labor knowledgeable in that specialized occupational area. Craft advisory committees can help provide assistance in the development, promotion, operation, evaluation, and maintenance of vocational education programs. Craft advisory committees may be established to serve an occupational program or closely related cluster of programs on a building, district, multi-district, or CEPD arrangement. Local conditions will dictate the most effective and efficient structure to establish. Additional information regarding advisory committees can be found in Tab II, Section I, of the Administrative Guide for Vocational-Technical Education in Michigan.

VI. TEACHER CERTIFICATION

All persons teaching a state approved vocational education program are required to be vocationally certified. The Michigan Department of Education publication entitled, "Administrative Manual - Vocational Teacher Certification", provides detailed information concerning vocational certification requirements. This document may be obtained by writing to the Michigan Department of Education Teacher Preparation and Certification Service, P. O. Box 30008, Lansing, Michigan, 48909, telephone: (517) 373-3310. Questions pertaining to vocational certification should be directed to the above address or phone number.

VII. FACILITIES AND EQUIPMENT

Facilities and equipment reflective of the business and office environment are required in all programs in business and office education. Fifty square feet per student work station should be used as a guide in determining facility size. "Cluster" programs utilize one facility. The State's Implementation Guide to Clustering in Business and Office Education should be referenced. State recommended equipment lists are provided for each program area in business and office education. That list can be obtained by contacting the Michigan Vocational Education Resource Center, 133 Erickson Hall, Michigan State University, East Lansing, MI 48824. For additional information on facilities, refer to the School Plant Planning Handbook, Bulletin 412 Supplement found in Tab II, Section O of the Administrative Guide for Vocational Education in Michigan.

VIII. CLASS TIME

The "block concept" is required for all programs/courses in Business and Office Education. A block of time is two or more consecutive class periods (minimum of 90 minutes per day and not less than 450 minutes per week of business/office education instruction).

IX. COOPERATIVE EDUCATION

Cooperative education is a method of instruction that combines work-related learning experiences available in the community with vocational instruction provided in an educational institution.

The essential elements of cooperative education programs include:

- A) Alternate or parallel periods of instruction in school and supervised public or private employment.
- B) A written training agreement among the school, an employer, and a student.
- C) Vocational instruction (including required academic instruction) related to the job and the student's academic study or career goals.
- D) Carefully planned alternation of study and work supervised to further the student's education and employability.
- E) The student's employment and compensation in compliance with federal, state, and local laws.

X. VOCATIONAL STUDENT ORGANIZATIONS

A vocational student organization is an integral part of a high quality business and office education program. All programs are encouraged to operate Business and Office Education Clubs (BOEC) chapters as an intracurricular component.

A) The purposes of BOEC are as follows:

1. To encourage the development of occupational skills, knowledges, and abilities to a high level of proficiency.
2. To develop leadership ability through participation in educational, vocational, civic, recreational, and social activities.
3. To develop character and to prepare members for useful citizenship and foster patriotism.
4. To motivate students and vitalize the instructional program.
5. To develop and strengthen the confidence of young people in themselves and their work.
6. To unite in a common bond without regard to race, creed, or national origin, students with similar career objectives.
7. To assist students in refining their career objectives through realistic training.
8. To develop a sense of social acceptability and individual responsibility toward the home and community.
9. To encourage scholastic improvement and school loyalty.
10. To foster a deep respect for the dignity of all work.

B) There are many benefits to the students, teachers, schools and communities who participate in the student organizations.

1. Benefits to Students:

- a) Provides incentives to improve personal and occupational skills.
- b) Provides career awareness and exploration activities.
- c) Provides leadership development opportunities.

- d) Provides activities to develop civic understanding and responsibility.
- e) Provides an opportunity to meet with business and industry leaders and students with similar backgrounds and career interests.

2. Benefits to Teachers:

- a) Motivates students.
- b) Publicizes vocational program.
- c) Provides opportunities to meet and work with vocational teachers in the same occupational area.
- d) Provides an established recognition program with awards for student achievement.
- e) Provides opportunities to meet and work with leaders in business, industry, and education.

3. Benefits to School/Community:

- a) Publicizes school and community.
- b) Creates school spirit.
- c) Develops pride in school and community.
- d) Provides students with leadership skills for future leadership positions.
- e) Involves students in community service activities.
- f) Students better trained to enter work force.

C) Experiences and Opportunities for BOEC Members

BOEC members learn to be both leaders and followers. They learn how to plan activities, carry out activities, to participate in cooperative experiences, to preside at meetings, to serve as chairpersons for committees, to manage finances, to get group consensus for decision making, and most importantly, to acquire the realization of compromise for the good of the majority -- a trait often needed on the job.

Being successful in a vocation often takes more than occupational skills. It also takes social understanding of human relations. Human relations is difficult to teach in the classroom. Students need experiences in social settings to acquire

the social intelligence needed to succeed in their jobs. Through BOEC conferences, workshops, and competitions, students increase sense of belonging, increase ability to adjust and increase the positive personality traits.

BOEC provides involvement and experiences with the community. Students can help to improve their community, learn to acknowledge the rights of others and develop useful citizenship habits by their involvement in community activities.

Through the awards and competitive events program, students receive motivation and recognition for their accomplishments. Competitions are conducted at the local, regional, state, and national levels and are directly related to the vocational education programs in which the students are enrolled. Competitions are hands-on experiences with evaluation and judging done by individuals employed in that area.

D) Operational Structure for BOEC

The local chapter is the foundation for the organization. Chapters are organized in the local high school or area vocational center based on the school's business and office education program. The business and office education teacher serves as the advisor for the local chapter. Local chapters elect student officers: President, Vice President, Secretary, Treasurer, Reporter, and Parliamentarian to lead the local chapter.

BOEC also has a regional structure within the State which provides geographical boundaries for leadership meetings and competitions. These eight regions make up the State association which serves as the organization that coordinates, communicates, and plans activities. At the State level, students are also elected to office (President, Secretary/Treasurer, Reporter, Parliamentarian, and eight Regional Vice Presidents) each year and their function is to plan and lead regional and State activities.

On the national level, Michigan BOEC is affiliated with the Office Education Association (OEA). OEA provides materials for the various state organizations and plans and conducts a national conference for OEA/BOEC members and advisors.

BOEC has two teacher/advisor committees that provide direction for the State organization. The State Advisory Committee (one teacher/advisor from each region) advises on the overall operation of the organization while the Competitive Events Committee deals strictly with regional and State competitions.

E) Finances

In order for students and advisors to be considered members of BOEC/OEA they must pay annual membership dues. Generally, there are dues at the local, State, and national levels. The amount of the local dues is set at the local level while the State dues (\$2.00) and national dues (\$5.00) are set by the respective levels. Payment of dues can be the responsibility of each student or they can be paid by the local chapter through fund raising, school contributions, or support from business and industry.

Costs to attend regional, State, and national conferences and activities are the responsibility of the local chapter. These costs are generally paid from revenue earned through fund raising activities. There are many fund raising activities that can relate to the vocational program and, therefore, serve as a fund raiser as well as an educational activity.

Vocational education State aid added cost funds can be used to pay for teacher/advisor expenses (mileage, meals, lodging, etc.) to attend regional/State/national conferences and activities. These added cost funds cannot be used for student expenses. However, local districts may elect to pay all student expenses out of their general fund revenues.

F. Technical Assistance

The State Board of Education has approved funding for a project at Western Michigan University to provide the leadership for the operation of the Michigan BOEC organization. Western Michigan University's responsibilities are to prepare and distribute materials, plan conferences, plan and conduct competitive events, communicate with chapters, provide advisor inservice, etc.

For information about BOEC contact:

Ms. Patricia VanDrew
BOEC Project Director
108 West Hall
Western Michigan University
Kalamazoo, MI 49008

OR Mr. Charles Arensmeier
Consultant
Vocational-Technical
Education Service
P. O. Box 30009
Lansing, MI 48909

(616) 383-1688

(517) 335-0361

X. REFERENCES

The following documents are available from the Michigan Vocational Education Resource Center, 133 Erickson Hall, Michigan State University, East Lansing, Michigan, 48824. Michigan toll free phone number: 1-800-292-1606.

- A) "Clustering Guide to Implementation in Vocational Business and Office Education"
- B) "The Vocational Cooperative Education Handbook"
- C) "The Legal Modules for Cooperative Education"
- D) "The Data Processing Curriculum Guide"
- E) "The Accounting and Computing Curriculum Guide"
- F) "The Steno/Clerical Curriculum Guide"
- G) "The Medical Secretary/Medical Office Assistant Curriculum Guide"

Other:

- H) "A Guide to Secondary Vocational Programs" (available through V-TES)

XII. TECHNICAL ASSISTANCE

Business and Office Education Consultant, Michigan Department of Education, Vocational-Technical Education Service, P.O. Box 30009, Lansing, Michigan, 48909, (517) 335-0381.

CONSUMER HOME ECONOMICS EDUCATION

I. DEFINITION

The Consumer Home Economics Education, Skills for Managing Life program (CIP Code 20.0101), consists of a group of seven one (1) semester instructional courses preparing males and females for the multiple roles of homemakers and wage earners, emphasizing the acquisition of knowledge and skills relevant to strengthening home environments and the quality of individual and family life. The seven (7) one semester courses are: Consumer Education, Essential Health & Living Skills, Family Living, Life Management Skills, Personal Living, Parenthood Education, and Nutrition Education.

II. INSTRUCTIONAL PROGRAM CONTENT

A) Consumer Education

The content of this course helps students to develop skills in examining their consumer behavior, managing finances, becoming an informed consumer, purchasing basic necessities, purchasing big ticket items, purchasing services and examining their role in the marketplace. Many of the tasks include use of a microcomputer and appropriate software.

1. Unit and Task Listing

a) Examine Your Consumer Behavior

- (1) Sort out your values
- (2) Practice making decisions
- (3) Analyze the relationship between career choice, income and purchasing power

b) Manage Your Finances

- (1) Interpret your paycheck
- (2) Prepare personal budget plan
- (3) Use financial institution services
- (4) Establish credit
- (5) Develop a personal recordkeeping system
- (6) Meet your tax obligations
- (7) Explore investment programs

c) Become an Informed Consumer

- (1) Examine the effects of advertising on the consumer
- (2) Obtain consumer information
- (3) Plan a purchase
- (4) Demonstrate consumer complaint procedures

d) Purchase Basic Necessities

- (1) Shop for food
- (2) Shop for clothing
- (3) Shop for grooming aids
- (4) Shop for health care products

e) Purchase Big Ticket Items

- (1) Shop for transportation
- (2) Shop for shelter
- (3) Shop for home furnishings
- (4) Shop for appliances

f) Purchase Services

- (1) Shop for health services
- (2) Shop for life insurance
- (3) Shop for legal services
- (4) Shop for personal services
- (5) Shop for leisure

g) Examine Your Role in the Marketplace

- (1) Explore the function of our economic system
- (2) Illustrate the effect of the economy on consumer behavior

B) Essential Health and Living Skills

The ten topics identified in the Michigan Health Model are: disease prevention and control; personal health practices; nutrition; growth and development; family health; safety and first aid education; and community health. These topics are identified as the units for the Essential Health and Living Skills course.

1. Unit and Task Listinga) Develop Personal Health Practices

- (1) Develop health habits
- (2) Care for your body
- (3) Develop a personal physical fitness routine

b) Examine Emotional and Mental Health

- (1) Control life directions through decision making
- (2) Explore feelings and emotions
- (3) Demonstrate stress management

c) Prepare for Personal Growth and Development*

- (1) Develop a self identity
- (2) Prepare for adolescent changes
- (3) Increase awareness of sex role development
- (4) Examine personal responsibility for human sexuality
- (5) Examine birth defects and inherited diseases
- (6) Examine the aging process
- (7) Examine death and dying

d) Investigate Family Health

- (1) Develop attitudes and values for family life
- (2) Examine roles within the family
- (3) Relate to family members
- (4) Examine abuse and neglect

e) Investigate the Effects of Substance Use and Abuse

- (1) Distinguish between the proper and improper use of over-the-counter and prescription drugs
- (2) Assess the use of tobacco
- (3) Assess the use of alcohol
- (4) Assess the use of drugs (psychoactive)
- (5) Formulate alternatives to substance abuse

f) Practice Disease Prevention and Control

- (1) Practice ongoing health care
- (2) Determine when medical attention is needed
- (3) Investigate infectious illnesses
- (4) Investigate chronic diseases
- (5) Demonstrate acceptable sanitary procedures

g) Assess Nutrition Needs

- (1) Provide for personal nutrition needs
- (2) Assess the relationship of nutrition to health, appearance and performance
- (3) Evaluate dietary fads
- (4) Examine nutrition needs for various stages of life and lifestyles

*This is an "optional unit." It is to be taught within the guidelines approved by the State Board of Education entitled, "Sex Education Guidelines, Including Reproductive Health and Family Planning," School Program Services.

h) Develop Consumer Health Skills

- (1) Choose health care products
- (2) Choose health services
- (3) Analyze health fads and fallacies
- (4) Use consumer protection information related to health
- (5) Investigate community health and service agencies

i) Demonstrate Safety Precautions

- (1) Practice home safety
- (2) Practice pedestrian and transportation safety
- (3) Practice recreational safety
- (4) Practice safety precautions in the community
- (5) Investigate environmental hazards
- (6) Demonstrate first aid procedures

C) Family Living

Family Living emphasizes practice and development of skills to: expand communication techniques, prepare for different needs in each of the life cycle stages, deal with diverse modes of life, coordinate work and family life, and develop the ability to recognize and/or cope with problems such as: abuse, divorce, remarriage, aged family members, and death.

1. Unit and Task Listinga) Develop Roles Within the Family

- (1) Examine the functions of the family
- (2) Examine family forms and structures
- (3) Examine alternative family structures/life styles
- (4) Examine roles within the family

b) Examine Developmental Changes and Life Styles of Families

- (1) Examine family life cycles/stages
- (2) Relate values to family life styles

c) Relate to Others

- (1) Assess relationships in your family
- (2) Assess quality of relationships
- (3) Improve family relationships
- (4) Examine marriage

- (5) Assess divorce and its impact on the individual and the family
- (6) Examine re-marriage
- (7) Develop sensitivity toward the elderly

d) Cope With Stressful Situations

- (1) Cope with stress and crises
- (2) Cope with family conflict
- (3) Investigate abuse and neglect of individuals/family members
- (4) Determine how death and dying affects individuals and family members

e) Prepare for Adult Living

- (1) Meet basic needs of the beginning family
- (2) Meet basic needs of the developing family
- (3) Meet basic needs of the maturing family
- (4) Meet basic needs of the aging family
- (5) Manage work roles and family life styles

D) Life Management Skills

The course Life Management Skills utilizes the "discovery approach" whereby the major source of subject matter and course content comes from research and discovery by the student. They act, do, move, make inquiries and make decisions utilizing classroom and school resources, as well as human and community resources. This approach has the student actually experiencing a "taste" of a typical lifestyle in the family life cycle from the time of high school graduation through the "golden years" as a senior citizen.

1. Unit and Task Listing

a) Review Management Skills

- (1) Analyze decision making skills
- (2) Apply decision making skills to a "real" life style situation
- (3) Demonstrate communication skills
- (4) Demonstrate independent living

b) Examine Survival Skills for Living at Home

- (1) Demonstrate money management in a "real" life style situation
- (2) Demonstrate communication skills in a "real" life style situation

- (3) Determine operational costs of an automobile in a "real" life style experience
- (4) Determine the cost of living at home in a "real" life situation
- (5) Demonstrate nutrition and foods management in a "real" life situation
- (6) Demonstrate looking good on the job in a "real" life situation
- (7) Demonstrate solving a health problem in a "real" life situation

c) Practice Independent Living on Your Own

- (1) Choose a living arrangement for a "real" life style situation
- (2) Decide whether to live with a roommate or live alone in "real" life style situation
- (3) Use a financial institution's services in a "real" life situation
- (4) Decide on a place to rent in a "real" life style situation

d) Apply Management Skills to Lifestyles Without Children

- (1) Decide on role expectations in "real" life situations without children
- (2) Decide on a way to cope with problems and maintain a place to live in a "real" life style situation without children
- (3) Decide upon a maintenance health plan and a leisure time activity for a "real" life style situation without children
- (4) Assess "real" life style situations without children

e) Apply Management Skills to Lifestyles With Children

- (1) Decide on role expectations in "real" life situations with children
- (2) Decide on a way to cope with common problems and practice time management in a "real" life style situation with children
- (3) Decide on communication strategies and how to purchase an item or service to meet family needs
- (4) Assess "real" life style situations with children

E) Parenthood Education

Parenthood Education teaches parenting skills via simulation, interaction with people who are parents and/or caregivers, and through direct interaction with children. Education for parenting expands on the process involved with becoming a parent through practical experiences to develop the necessary knowledge to encourage children's physical, social, emotional, and intellectual development. The course examines personal readiness to become a parent and the issues important to raising healthy children with positive parent-child relationships.

1. Unit and Task Listing

a) Prepare for Parenthood

- (1) Determine readiness for parenthood or making parenthood decisions
- (2) Explore the operation of various family structures relative to parenting
- (3) Determine the financial and emotional responsibilities of parenthood
- (4) Analyze parenting methods

b) Examine Human Reproduction*

- (1) Distinguish between the effects of heredity and environment on human development
- (2) Examine human development from conception through the birth process
- (3) Analyze the needs of the expectant parents

c) Care for Emotional and Social Needs of Children

- (1) Demonstrate the ability to provide for the emotional and social development of children
- (2) Demonstrate the ability to guide and discipline children
- (3) Examine the causes and effects of child abuse

d) Care for the Intellectual Needs of Children

- (1) Sequence the intellectual development of children
- (2) Select activities for optimum intellectual development

*This is an "optional unit." It is to be taught within the guidelines approved by the State Board of Education entitled, "Sex Education Guidelines, Including Reproductive Health and Family Planning," School Program Services.

e) Care for Physical Needs of Children

- (1) Assess the physical and motor development of children
- (2) Demonstrate physical care of children

f) Explore Supportive Child Care Services

- (1) Examine parent/career adjustments
- (2) Determine the need for supportive child care
- (3) Assess desired qualities of care givers
- (4) Assess child care environments
- (5) Determine services of social service agencies

F) Personal Living

In the Personal Living course, emphasis is placed on the individual and his or her relationship with others. Basic human needs include psychological as well as physiological needs. Life-long psychological needs include the need for and expression of love, affection and belonging, development of interpersonal skills, behavior modification, appropriate use of assertiveness, eliminating sex role stereotyping, dealing with stress, conflict, abuse and practicing problem-solving techniques. Personal Living allows the student to obtain self knowledge and to practice the skills necessary for a successful and responsible life. The emphasis is on each person to grow and achieve his or her full potential.

1. Unit and Task Listinga) Develop Self Awareness

- (1) Improve self concept
- (2) Assess the emotional self
- (3) Assess the personality
- (4) Assess personal assertiveness
- (5) Practice decision making skills

b) Cope With Present Situations

- (1) Manage stress
- (2) Manage conflict through problem solving techniques
- (3) Determine acceptable and unacceptable alternatives to substance abuse
- (4) Examine the trauma and avoidance of rape/incest
- (5) Demonstrate maturity

c) Develop Interpersonal Relationships

- (1) Examine role relationships
- (2) Examine community roles and relationships
- (3) Examine interpersonal relationships
- (4) Examine marital readiness
- (5) Examine the single life style

d) Examine Human Sexuality*

- (1) Clarify sex roles
- (2) Review the reproductive system
- (3) Determine the causes and effects of social diseases
- (4) Assess individual responsibility for human sexuality

e) Prepare for Single Life

- (1) Meet basic food needs
- (2) Meet basic clothing needs
- (3) Meet basic shelter needs
- (4) Meet basic financial needs
- (5) Provide for health care

f) Maximizing Human Potential

- (1) Grow in self-knowledge
- (2) Expand achievements through personal experience
- (3) Achieve self-actualization

G) Nutrition Education

Nutrition Education will emphasize the growing role of diet in relationship to physical and psychological health care. This course is to be designed for the advanced nutrition student. Nutrition Education is being developed as part of the Standards for Michigan Vocational Consumer Home Economics Program. Teachers will receive notification from Instructional Development and Evaluation Associates, Inc. (I.D.E.A.) when it is available.

*This is an "optional unit." It is to be taught within the guidelines approved by the State Board of Education entitled, "Sex Education Guidelines, Including Reproductive Health and Family Planning," School Program Services.

III. PROGRAM REQUIREMENTS

A) Criteria for Approval

Local Education Agencies operating state-approved Consumer Home Economics Programs will:

1. Have an established advisory council to make recommendations on the planning, implementation, promotion and review of the program. (Additional information regarding advisory councils can be found in Tab II, Section I of the Administrative Guide for Vocational-Technical Education in Michigan.)
2. Operate a minimum of four (4) different one semester content courses annually from the following six (6) choices:
 - (1) Consumer Education
 - (2) Essential Health & Living Skills
 - (3) Family Living
 - (4) Life Management Skills
 - (5) Parenthood Education
 - (6) Personal Living

Examples of an eligible person:

- a) Essential Health & Living Skills - 1 Semester
Personal Living - 1 Semester
Consumer Education - 1 Semester
Life Management Skills - 1 Semester
- b) Parenthood Education - 1 Semester
Family Living - 1 Semester
Essential Health & Living Skills - 1 Semester
Consumer Education - 1 Semester
- c) Nutrition Education is not eligible to be included as one of the four (4) required content courses.
3. Have a task-based curriculum. See Section II for a listing of tasks and Section VII, A-4, for further information.
4. Complete a program review using the Standards for Michigan Vocational Consumer Home Economics Programs to provide a basis for developing and initiating implementation of an "Action Plan for Program Improvement" prior to submitting a new program application (VE-4001C). After operating the program for three (3) years, the activity should be repeated. This requirement will be continued on a three year cycle from that point.

5. Implement strategies that encourage the participation of traditionally underserved populations.
6. Implement strategies that encourage the elimination of sex bias and stereotyping.
7. Provide class periods that are of the same duration of time as other classes receiving the same amount of credit.
8. Be taught by Vocationally Certified Consumer Home Economics teachers. The Michigan Department of Education publication entitled, "Administrative Manual - Vocational Teacher Certification," provides detailed information concerning vocational certification requirements. This document may be obtained by writing to the Michigan Department of Education Teacher Preparation and Certification Service, P.O. Box 30008, Lansing, Michigan, 48909, telephone: (517) 373-3310. Questions pertaining to vocational certification should be directed to the above address or phone number.

B) Delivery System Option Request

Local education agencies too small to operate the required minimum of four (4) different content courses annually may apply for a two-year rotation schedule if their high school enrollment (grades 9-12) is 500 students or less. A two-year rotation schedule requires a minimum of four (4) different course offerings out of the six (6) eligible choices operated within the two-year period. Districts that are qualified and desire to use this option should request a "Consumer Home Economics Delivery System Option Request" form from Francine Smithson, Vocational-Technical Education Service, Box 30009, Lansing, Michigan, 48909, at telephone (517) 373-3365. This request form should be submitted with the CEPD Annual Plan.

The Program Delivery System Option Request will not have to be submitted annually and is effective beginning the 1986-87 school year.

The delivery system option request supersedes Section VIII, Program Deviation, Tab II, Section H, Page 5, dated 7/1/85, Guidelines for Secondary Vocational Consumer Home Economics Education. The two-year rotation schedule is the only permitted deviation.

C) Middle School/Junior High School Program

It is strongly recommended that an exploratory Consumer Home Economics Program be provided for students in grades 5-8. The program should include one semester courses in: Life Survival Skills, Self Awareness, Nutrition and Foods, Career Development,

and Contemporary Clothing Skills. This program should be articulated with the high school program.

Presently, there are no funds available for the reimbursement of a middle school/junior high school program. However, there are curriculum guides for the courses identified above and a variety of technical assistance is available to teachers of these programs, which is supported by vocational funds. See Section VII-A for further information.

IV. VOCATIONAL STUDENT ORGANIZATIONS

A vocational student organization is an integral part of a high quality consumer and homemaking education program. All programs are encouraged to operate Future Homemakers of America-Home Economics Related Occupations (FHA-HERO) chapters as an intracurricular component.

A) The purposes of FHA-HERO are as follows:

1. To encourage the development of occupational skills, knowledges, and abilities to a high level of proficiency.
2. To develop leadership ability through participation in educational, vocational, civic, recreational, and social activities.
3. To develop character and to prepare members for useful citizenship and foster patriotism.
4. To motivate students and vitalize the instructional program.
5. To develop and strengthen the confidence of young people in themselves and their work.
6. To unite in a common bond without regard to race, creed, or national origin, students with similar career objectives.
7. To assist students in refining their career objectives through realistic training.
8. To develop a sense of social acceptability and individual responsibility toward the home and community.
9. To encourage scholastic improvement and school loyalty.
10. To foster a deep respect for the dignity of all work.

- B) There are many benefits to the students, teachers, schools and communities who participate in the student organizations.

1. Benefits to Students:

- a) Provides incentive to improve personal and occupational skills.
- b) Provides career awareness and exploration activities.
- c) Provides leadership development opportunities.
- d) Provides activities to develop civic understanding and responsibility.
- e) Provides an opportunity to meet with business and industry leaders and students with similar backgrounds and career interests.

2. Benefits to teachers:

- a) Motivates students.
- b) Publicizes the vocational program.
- c) Provides opportunities to meet and work with vocational teachers in the same occupational area.
- d) Provides an established recognition program with awards for student achievement.
- e) Provides opportunities to meet and work with leaders in business, industry, and education.

3. Benefits to School/Community:

- a) Publicizes the school and community.
- b) Creates school spirit.
- c) Develops pride in the school and community.
- d) Provides students with leadership skills for future leadership positions.
- e) Involves students in community service activities.
- f) Students are better trained to enter the work force.

C) Experiences and Opportunities for FHA-HERO Members

FHA-HERO members learn to be both leaders and followers. They learn how to plan activities, carry out activities, to participate in cooperative experiences, to preside at meetings, to serve as chairpersons for committees, to manage finances, to get group consensus for decision making, and most importantly, to acquire the realization of compromise for the good of the majority -- a trait often needed on the job.

Being successful in a vocation often takes more than occupational skills. It also takes social understanding of human relations. Students need experiences in social settings to acquire the social intelligence needed to succeed in their jobs. Through FHA-HERO conferences, workshops, and action event competitions, students increase a sense of belonging, increase the ability to adjust and increase the positive personality traits.

FHA-HERO provides involvement and experiences with the community. Students can help to improve their community, learn to acknowledge the rights of others and develop useful citizenship habits by their involvement in community activities.

Through the awards and action events program, students receive motivation and recognition for their accomplishments. Action events are conducted at the local, state, and national levels and are directly related to the vocational education programs in which the students are enrolled. Competitions are hands-on experiences with evaluation and judging done by individuals employed in the home economics area.

D) Operational Structure for FHA-HERO

The local chapter is the foundation for the organization. Chapters are organized in the local high school or area vocational center based on the school's home economics education program. The home economics education teacher serves as the advisor for the local chapter. Local chapters elect student officers: President, Vice President, Secretary/Treasurer, Reporter, Parliamentarian, Vice President of Degree (Points), Vice President of Program, and Vice President of Recreation to lead the local chapter.

FHA-HERO also has a regional structure within the State which provides geographical boundaries for leadership and regional meetings. These eight regions make up the State association which serves as the organization that coordinates, communicates, and plans activities. At the State level, students are also elected to office (President, First Vice President, Vice President of HERO, Vice President of Program, Vice President of

Public Relations, Vice President of Evaluation, Secretary/Treasurer, and Parliamentarian) each year and their function is to plan and lead regional and State activities.

On the national level, Michigan FHA-HERO is affiliated with the Future Homemakers of America (FHA). FHA provides materials for the various state organizations and plans and conducts a national conference for FHA-HERO members and advisors.

FHA-HERO has a teacher/advisor committee that provides direction for the State organization. The State Advisory Committee is composed of one teacher/advisor from each region plus three state officers and their advisors.

E) Finances

In order for students and advisors to be considered members of FHA-HERO they must pay annual membership dues. Generally, there are dues at the local, state, and national levels. The amount of the local dues is set at the local level while the State dues (\$2.00) and national dues (\$4.00) are set by the respective levels. Payment of dues can be the responsibility of each student or they can be paid by the local chapter through fund raising, school contributions, or support from business, industry, and education.

Costs to attend regional, State, and national conferences and activities are the responsibility of the local chapter. These costs are generally paid from revenue earned through fund raising activities. There are many fund raising activities that can relate to the consumer and homemaking program and, therefore, serve as a fund raiser as well as an educational activity.

F) Technical Assistance

The State Board of Education has approved funding for a project at Michigan State University to provide the leadership for the operation of the Michigan FHA-HERO organization. Michigan State University's responsibilities are to prepare and distribute materials, plan conferences, plan and conduct action events, communicate with chapters, provide advisor inservice, etc.

For information about FHA-HERO contact:

Ms. Darlene Clark-Gordon	OR	Mr. Charles Arensmeier
FHA-HERO Project Director		Consultant
106 Wills House		Vocational-Technical
Michigan State University		Education Service
East Lansing, MI 48824		P. O. Box 30009
(517) 355-7662		(517) 335-0361

V. FUNDING POLICY/GUIDELINES FOR PROGRAMS EXCEPT PARENTHOOD EDUCATION*

A) Expenditure Guidelines

1. Non-Eligible Expenditures

Federal funds may not be expended on program maintenance, such as supplies, teacher salaries, and equipment not specified in the task-based curriculum identified in the Standards for Michigan Consumer Home Economics Education Programs.

2. Eligible Expenditures

Federal funds shall go for program improvement, expansion, and updating, such as:

a) Inservice

(1) Improvement of Instruction

It is recommended that inservice directed toward program improvement, expansion, and updating which is associated with task-based curricula, Standards, and implementing Action Plans, should constitute first priority.

(2) Evaluation and Follow-up

Evaluation and follow-up activities are allowable expenditures provided these activities are compatible with the objectives in the task-based curricula.

a. Complete a program review using the Standards for Michigan Vocational Consumer Home Economics Programs to provide a basis for developing and initiating implementation of an "Action Plan for Program Improvement." This activity is to be repeated every three years by all programs irrespective of when the initial Action Plan was submitted and is to be submitted with the CEPD annual Plan beginning December of 1987.

b. Conduct a Peer Review of the Consumer Home Economics Education program every three (3) years. The Action Plan Update should reflect the result of this activity. Peer Review results should be available upon request. (Peer Review pilots are

*Parenthood Education Guide available from the Vocational-Technical Education Service.

planned for the 1986-87 school year.) Guidelines for conducting a Peer Review will be available in July of 1987.

(3) Resource People/Guest Speakers

Professional fees for visiting consultants, resource people, guest speakers, field trips, and dues for professional organizations are included as vocational education costs, provided these activities are compatible with the objectives in the task-based curricula.

b) Equipment Rental, Repair, or Purchase

- (1) Equipment expenditures must be related directly to courses approved for federal reimbursement, provided they are compatible with task-based curricula identified in the Standards.

c) Instructional Materials

- (1) Examples of material expenses would be audio visual, educational television, and computer-assisted instruction.

d) Instructional Travel

- (1) Instructional travel for purposes of inservice education, field work, and conferences are examples of activities that have direct costs associated with Consumer Home Economics Education.

B) Reimbursement Guidelines

There will be two reimbursement rates: one for programs operating in economically depressed areas of the state and one for programs operating in non-economically depressed areas of the state.

For purposes of reimbursement, the definition of economically depressed areas will be those local school districts operating approved Consumer Home Economics programs which are in the top one third of the Title I eligibles (ECIA, Chapter I) when listed in rank order from highest to lowest.

Reimbursement will be generated by student enrollment (per student hour) on a full year equated basis. The rate of reimbursement in fiscal year 1985-86 for local education agencies operating Consumer Home Economics programs in economically

depressed areas was \$29.61 per student hour and in non-economically depressed areas \$22.26 per student hour. Reimbursement is computed not to exceed a 30-1 student/teacher ratio per section.

Nutrition Education will be eligible for reimbursement only if four other subject matter courses are operating within a school year.

Reporting of total expenditures for the Consumer Home Economics program courses eligible for federal program improvement funds will be reported on a DS-4033. This form contains a separate single column breakout of the federal funds used for program improvement, expansion, and updating in the following categories: Inservice, Instructional Travel, Instructional Materials, and Equipment Rental, Repair or Purchase.

VI. PROGRAM APPLICATION PROCEDURE

Each year the planning of new local vocational programs is coordinated through a process known as the CEPD Annual Plan. The following steps need to be followed to apply for a new Consumer Home Economics program:

A) Submit a Letter of Intent

In April of each year, the Letter of Intent format with new timelines and information on planning new programs is mailed to all K-12 Superintendents, Vocational Directors, CEPD Specialists, and Area Center Principals. A Letter of Intent must be completed and sent to the CEPD Specialist who will review it with the CEPD Planning Committee and submit it to the Vocational-Technical Education Service by a pre-announced June deadline date.

B) New Program and Equipment Applications

It is the CEPD Specialist's responsibility to assist each local school district to complete the program and equipment applications (VE-4001C) and submit them as part of the CEPD Annual Plan to the Vocational-Technical Education Service by the middle of December of each year. Reimbursement will be based upon operating a minimum of 4 courses as reported on the VE-4483D form.

C) Equipment Requests

Microcomputers are eligible for reimbursement. For new programs use the VE-4001C. Application (VE-4001D) may be submitted to request reimbursement for microcomputers in ongoing programs. Reimbursement is on a 50/50 matching basis.

D) Application Approval Procedure

The Vocational-Technical Education Service will complete the review of all applications and will notify local districts of the program approval/ disapproval by February. State Board of Education action on equipment grants takes place annually in June.

VII. TECHNICAL ASSISTANCE/RESOURCE INFORMATION FOR THE 1986-87 SCHOOL YEAR

- A) The following technical assistance and resource information is available to local school districts who want to implement the Standards for Michigan Vocational Consumer Home Economics Programs (Middle School/Junior High and High School) from Instructional Development and Evaluation Associates, Inc., (I.D.E.A.), 3811 West Twelve Mile Road, Berkley, Michigan, 48072, at telephone: (313) 541-1680 or 1-800-321-8076.

1. Brochure - "Questions and Answers" on the Standards for Michigan Vocational Consumer Home Economics Education Programs.
2. Document - Standards for Michigan Occupational Consumer Home Economics Programs (Middle School/Junior High and High School).
3. Consultants - Project staff from I.D.E.A. will assist education agencies to:
 - a) Review the local Consumer Home Economics program with the Standards document.
 - b) Establish recommendations for improving and updating the Consumer Home Economics program.
 - c) Develop a Plan of Action for implementing the Standards.

It should be noted that a), b), and c) must be completed to be eligible to receive the technical assistance identified in numbers 4-8 which follow.

4. Task based Curricula - A new middle/junior high school "Skills for Living" curriculum (five courses) and a high school curriculum "Skills for Managing Life" (six courses). All eleven guides reflect the new technological and societal changes in the 1980's. Also available is a "Curriculum Guide for Administrators of Vocational Consumer Home Economics Programs."

5. Curriculum Support Products - Includes a Cluster Guide which assists Consumer Home Economics teachers with special education students who are mainstreamed into the Consumer Home Economics classroom; FHA Guide which assists teachers with integrating FHA into the course content.
6. Microcomputer and Software Products - Includes: (a) an assessment of Consumer Home Economics software, (b) software catalog, (c) software available for review, and (d) a new software package on Automatic Teller Machines. Software and hardware are also identified by task in each curriculum guide.
7. Program Support Products - Includes: (a) public relations materials, (b) "Teachers Network" established to enhance sharing and communication between standards implementors, and (c) Standards Implementor, a newsletter sent to all teachers four times a year.
8. Inservice - Workshops provided for teachers on the utilization of the products identified above.

B) Additional Technical Assistance

Consumer Home Economics Education Consultant - Francine Smithson, Michigan Department of Education, Vocational-Technical Education Service, P.O. Box 30009, Lansing, Michigan, 48909, at telephone (517) 373-3365.

HEALTH OCCUPATIONS EDUCATION

I. DEFINITION

Health Occupations Education in Michigan comprises the body of related subject matter, or the body of related courses and planned experiences designed to impart knowledge, to develop understanding, and to develop the skills required to support the Health profession.

II. OBJECTIVES

The primary objectives of Health Occupations Education programs are:

1. To give students the entry level skills needed for employment and career mobility.
2. To increase students options for occupational choice in the pursuit of a job, as well as providing a cognitive base for postsecondary education or a combination of both in the health field.
3. To provide both campus and industry based learning experiences.
4. To bridge the gap between education and the world of work.
5. To prepare pupils for occupational objectives concerned with assisting qualified personnel in providing diagnostic, therapeutic, preventive, restorative, rehabilitative, convalescent and custodial services to people, including human relationships and skill training essential to provide care and health services to patients.

III. INSTRUCTIONAL CONTENT

- A) Content (Core): This instructional component should provide: 1) basic health science skills such as anatomy and physiology and related lab skills; medical asepsis; vital signs; CPR and first aid; 2) leadership skills; and 3) health career information and guidance.
- B) Content (Cluster and Specific Preparation): These instructional components should provide: 1) essential health care skills such as medical ethics and law, communications, human relations, body mechanics, safety and medical terminology; 2) leadership skills; 3) responsibility skills; and 4) job skills specific to an entry-level health career.

IV. INSTRUCTIONAL PROGRAMS

<u>CIP CODE</u>	<u>PROGRAM DESCRIPTION</u>
17.0100	<u>Dental Occupations Cluster.</u> Instructional programs designed to provide students with those skills and experiences necessary for them to provide supportive services to the dental profession.
	<u>Course 01</u> <u>Dental Assisting.</u> An instructional program that prepares individuals to assist a dentist at the chairside in a dental operation, to perform reception functions, clerical functions, and selected dental laboratory procedures.
	<u>Course 02</u> <u>Dental Laboratory Technology.</u> An instructional program that prepares individuals to make and repair restorative appliances required for the oral health of the patient, as prescribed by a dentist.
17.0200	<u>Diagnostic Services.</u> A group of instructional programs that prepares individuals to use equipment and medical materials for diagnostic and therapeutic purposes by learning to operate electrocardiograph and electroencephalograph machines.
	<u>Course 01</u> <u>Electroencephalograph Technology.</u> An instructional program that prepares individuals to operate and maintain the electroencephalograph to measure impulse frequencies and differences in electrical potential between the various areas of the brain to obtain data for the physician to use in diagnosing brain disorders. Includes instruction in making minor repairs.
	<u>Course 02</u> <u>Electrocardiograph Technology.</u> An instructional program that prepares individuals to operate and maintain an electrocardiograph machine to record electromotive variations in the action of the patient's heart muscle. Includes instruction in making minor repairs.

<u>CIP CODE</u>	<u>PROGRAM DESCRIPTION</u>
17.0300	<u>Laboratory Occupations Cluster.</u> A group of instructional programs that prepares individuals to carry out technical functions to obtain data for use in diagnosis, treatment, and control of diseases, under the supervision of medical specialists. Includes instruction in the use of technical equipment and the administration of medical and/or chemical agents. <u>Course 01</u> <u>Clinical Laboratory Assisting.</u> An instructional program that prepares individuals to perform routine clinical laboratory procedures under the supervision of medical laboratory technicians, pathologists, or other physicians. <u>Course 02</u> <u>Histologic Technology.</u> An instructional program that prepares individuals to prepare, section, and stain tissue for microscopic study by a pathologist or other clinical scientist.
17.0503	<u>Medical Office Cluster.</u> A group of instructional programs that prepare individuals to assist specialists in the health field in providing support functions in such areas as the medical offices, hospital wards, business offices, clinics, and vision centers. <u>Course 01</u> <u>Medical Office Assisting.</u> An instructional program that prepares students to perform secretarial, clinical, and laboratory duties in a medical office or other health care facility. Students will utilize medical terminology; learn hospital, clinical, or laboratory procedures; and understand legal and insurance forms. The student takes dictation in shorthand or uses a transcribing machine; and compiles and records medical charts, case histories, reports and correspondence into typewritten mailable format. The student will learn to keyboard, input, edit, and revise medical records and correspondence utilizing word processing equipment. <u>Course 02</u> <u>Optometric Assisting.</u> An instructional program that prepares individuals to assist in performing tests to determine defects in vision, preparing and fitting eyeglasses or contact lenses, and administering correc-

<u>CIP CODE</u>	<u>PROGRAM DESCRIPTION</u>
	tive eye exercise and other treatments which do not require drugs or surgery.
17.0507	<u>Pharmacy Assisting.</u> An instructional program that prepares individuals to assist the pharmacist in performing routine duties related to maintaining and dispensing pharmaceutical supplies and medications, under supervision of a registered pharmacist.
17.0600	<u>Nursing Occupations Cluster.</u> Instructional programs which prepare students for occupations that render health services directly to individuals.
<u>Course 01</u>	<u>Nursing Assisting.</u> An instructional program that prepares individuals to perform routine tasks under the supervision of a registered or licensed practical nurse, in the provision of personal care to individuals who are receiving nursing care.
<u>Course 02</u>	<u>Practical Nursing.</u> An instructional program that prepares individuals to assist in providing general nursing care under the direction of a registered nurse, physician, or dentist.
<u>Course 03</u>	<u>Home Health Aide.</u> An instructional program that prepares individuals to assist elderly, convalescent, or handicapped patients in their homes by providing for physical, mental, emotional, and/or social healthcare needs, under the supervision of a registered nurse or physician.
<u>Course 04</u>	<u>Surgical Technology.</u> An instructional program that prepares individuals to serve as general technical assistants before, during, and after operations. Includes instruction in pre-operation patient and surgical team preparation, supply inventory maintenance, and sterilization and cleaning of equipment and operating rooms.
<u>Course 05</u>	<u>Emergency Medical Technology.</u> An instructional program that prepares individuals to function at the emergency

<u>CIP CODE</u>	<u>PROGRAM DESCRIPTION</u>
17.0600 Cont.	level to treat various cardiopulmonary problems, using cardiac resuscitation and other emergency equipment; airway, fracture, and hemorrhage management; emergency childbirth; and special care of patients exposed to heat, cold, radiation, or contagious disease. Includes instruction in techniques and application of intravenous fluid therapy, pharmacology, and anesthetics.
17.9900	<u>Health Occupations Cluster.</u> A summary of groups of instructional programs that prepares individuals to assist qualified health professionals providing diagnostic, therapeutic, preventive, restorative, and rehabilitative services to individuals in health care facilities, the home, and community. The health occupations cluster includes an exploration of a minimum of ten health occupations through the use of speakers, audio-visual materials, field trips, and/or clinical rotations. The Health Occupations Cluster program offers curriculum that allows students to gain knowledge and skills in health occupations careers, job exploration, job preparation, and consumer concerns in quality health service.

V. SPECIAL CONDITIONS

Those educational agencies, interested in operating Health Occupations Education programs, must consider that in addition to the Vocational-Technical Education Service's planning and application process, some Health Occupations Education programs must meet requirements for approval which are specified in rules and regulations and enforced by specific governmental agencies. Such is the case for Practical Nursing, which is under the auspices of the State Board of Nursing in the Department of Licensing & Regulation. Health care resources must be surveyed locally and regionally to assure programs considered are compatible with the needs of the community, the students, and the employer.

VI. ADVISORY COMMITTEES

All state approved vocational education programs are required to make use of an occupational or craft advisory committee composed primarily of persons from business, industry, and labor knowledgeable in that specialized occupational area. Craft advisory committees can help provide assistance in the development, promotion, operation, evaluation, and maintenance of vocational education programs. Craft advisory committees may be established to serve an

occupational program or closely related cluster of programs on a building, district, multi-district, or CEPD arrangement. Local conditions will dictate the most effective and efficient structure to establish. Additional information regarding advisory committees can be found in Tab II, Section I of the Administrative Guide for Vocational-Technical Education in Michigan.

VII. TEACHER CERTIFICATION

All persons teaching a state approved vocational education program are required to be vocationally certified. The Michigan Department of Education publication entitled, "Administrative Manual - Vocational Teacher Certification", provides detailed information concerning vocational certification requirements. This document may be obtained by writing to the Michigan Department of Education Teacher Preparation and Certification Service, P. O. Box 30008, Lansing, Michigan, 48909, telephone: (517) 373-3310. Questions pertaining to vocational certification should be directed to the above address or phone number.

VIII. PROGRAM ORGANIZATION

Health Occupations Education does encompass those careers providing health care services to individuals and communities in therapeutic, preventive and restorative areas in a wide selection of settings. Included are health care facilities such as nursing homes, hospitals and extended care facilities, community health service agencies, professional offices, private clinics and Health Maintenance Organizations (HMO's).

A variety of teaching methods are utilized by the HOE instructor including: 1) guest speakers; 2) large and small group discussion and instruction; 3) individualized instruction; 4) field trips; 5) role-playing/simulation; 6) audiovisual aids; 7) demonstration; and, 8) (cluster and specific preparation) clinical experience/instruction.

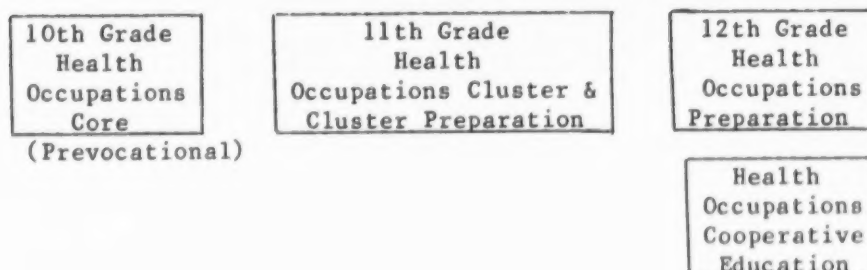
Health Occupations Education programs are organized around the following patterns: Single occupation courses or the Health Occupations Cluster. An essential part of each pattern includes planned supervised experience in the clinical setting, as well as in-school learning. Health Occupations Education programs will include any one or a combination of the following instructional methods: Cooperative Education, in-school laboratory, or extended laboratory.

IX. PROGRAM SEQUENCE

The ideal course sequence for a Health Occupations Education program is as follows: Tenth-grade students complete a Health Occupations Core Course that, in addition to exploring health careers, teaches basic competencies common to most health occupations. Eleventh-grade students complete a Health Occupations Cluster Course which

helps them clarify career goals and combines classroom instruction with on-the-job experience for the purpose of mastering both validated core competencies and the competencies for an entry-level health assistant. Twelfth-grade students obtain more specific entry-level training in areas of health that need additional training such as: Nursing Assistant, Dental, Medical Laboratory, and Practical Nurse. Additionally, twelfth-grade students may enroll in a Health Occupations Cooperative Education Course after completion of the Health Occupations Cluster, single courses, or while currently enrolled in the cluster or single course.

IDEAL SEQUENCE
SECONDARY HEALTH OCCUPATIONS EDUCATION
PROGRAM



X. FACILITIES AND EQUIPMENT

Provision for space and equipment is necessary that will create, as much as possible, the atmosphere of the appropriate health care agency for which the training will be conducted. Provision for a supply of hot and cold water, with adequate sink facilities, is essential for all in-school laboratories where Health Occupations Education programs are to be conducted. Storage cabinets and work counters, with built-in storage, are a must. Adequate 110V electrical outlets should be conveniently located around the room. Location of the classroom needs to be away from disturbing noises, visitors, and student traffic. Equipment layout should allow for flexibility and assure privacy in health occupations practice areas.

Student/Space Ratios

The following ranges for square feet per pupil per CIP Code number reflect the housing needs for equipment and activities found in a traditional program. An innovative approach in the classroom and in health care facilities may require lighter or heavier space allocations for student-space ratios.

<u>CIP CODE</u>	<u>COURSE</u>	<u>PROGRAM DESCRIPTOR</u>	<u>SQUARE FOOT PER MINIMUM</u>		<u>RANGE PUPIL OPTIMUM</u>
17.0100	01	Dental Assisting	80	-	100
17.0300	01	Medical Laboratory Assisting	30	-	50
	02	Histology	30	-	50
17.0503	01	Medical Office Assistant	30	-	50
	02	Optometric Assistant	30	-	50
17.0507		Pharmacy Assisting	65	-	80
17.0600	01	Nursing Assistant Aide	65	-	80
	02	Practical Nursing	65	-	80
	03	Home Health Aide	65	-	80
	04	Surgical Technician	80	-	100
	05	Emergency Medical Technician	65	-	80
17.9900		Health Cluster	80	-	100

For additional information for planning facilities, please refer to the School Plant Planning Handbook, Bulletin 412 Supplement, found in Tab II, Section O of the Administrative Guide for Vocational-Technical Education in Michigan.

XI. CLASS TIME

<u>CIP CODE</u>	<u>COURSE</u>	<u>PROGRAM DESCRIPTOR</u>	<u>MINIMUM TIME REQUIREMENT</u>
17.0100		<u>Dental Occupations Cluster</u>	
	01	Dental Assisting	2 class periods**
	02	Dental Laboratory	2 class periods**
17.0200		<u>Diagnostic Services</u>	
	01	Electroencephalograph Technology	2 class periods**
	02	Electrocardiograph Technology	2 class periods**
17.0300		<u>Laboratory Occupations Cluster</u>	
	01	Clinical Laboratory Assisting	2 class periods**
	02	Histologic Technology	2 class periods**
17.0503		<u>Medical Office Cluster</u>	
	01	Medical Office Assistant	1 class period*
	02	Optometric Assistant	2 class periods**
17.0507		Pharmacy Assisting	2 class periods**
17.0600		<u>Nursing Occupations Cluster</u>	
	01	Nursing Assisting	1 class period*
	02	Practical Nursing	2 class periods**
	03	Home Health Aide	1 class period*
	04	Surgical Technology	2 class periods**
	05	Emergency Medical Technology	2 class periods**
17.9900		<u>Health Occupations Cluster</u>	
		Health Cluster Programs	1 class period*

* = Although one (1) class period operation of the above programs/courses is allowable, the preferable mode of operation is two consecutive class periods

** = Class periods must run consecutively

Program Completion

A Health Occupations Education program completer is a student who has completed a minimum of one (1) course which meets one (1) or two (2) periods per day, five (5) days per week for two (2) semesters and has mastered the competencies of an entry-level health care worker.

XII. COOPERATIVE EDUCATION

Cooperative education is a method of instruction that combines work-related learning experiences available in the community with vocational instruction provided in an educational institution.

The essential elements of cooperative education programs include:

- A) Alternate or parallel periods of instruction in school and supervised public or private employment.
- B) A written training agreement among the school, an employer, and a student.
- C) Vocational instruction (including required academic instruction) related to the job and the student's academic study or career goals.
- D) Carefully planned alternation of study and work supervised to further the student's education and employability, and
- E) The student's employment and compensation in compliance with federal, state, and local laws.

See Tab II, Section J of the Administrative Guide for Vocational-Technical Education in Michigan for additional information.

XIII. VOCATIONAL STUDENT ORGANIZATIONS

A vocational student organization is an integral part of a high quality health occupations education program. All programs are encouraged to operate Health Occupations Students of America (HOSA) chapters as an intracurricular component.

A) The purposes of HOSA are as follow:

- 1. To encourage the development of occupational skills, knowledges, and abilities to a high level of proficiency.
- 2. To develop leadership ability through participation in educational, vocational, civic, recreational, and social activities.

3. To develop character and to prepare members for useful citizenship and foster patriotism.
4. To motivate students and vitalize the instructional program.
5. To develop and strengthen the confidence of young people in themselves and their work.
6. To unite in a common bond without regard to race, creed, or national origin, students with similar career objectives.
7. To assist students in refining their career objectives through realistic training.
8. To develop a sense of social acceptability and individual responsibility toward the home and community.
9. To encourage scholastic improvement and school loyalty.
10. To foster a deep respect for the dignity of all work.

B) There are many benefits to the students, teachers, schools and communities who participate in the student organizations

1. Benefits to Students:

- a) Provides incentives to improve personal and occupational skills.
- b) Provides career awareness and exploration activities.
- c) Provides leadership development opportunities.
- d) Provides activities to develop civic understanding and responsibility.
- e) Provides an opportunity to meet with health and business leaders and students with similar backgrounds and career interests.

2. Benefits to Teachers:

- a) Motivates students.
- b) Publicizes the vocational program.
- c) Provides opportunities to meet and work with vocational teachers in the same occupational area.

- d) Provides an established recognition program with awards for student achievement.
- e) Provides opportunities to meet and work with leaders in health, business, and education.

3. Benefits to School/Community:

- a) Publicizes the school and community.
- b) Creates school spirit.
- c) Develops pride in the school and community.
- d) Provides students with leadership skills for future leadership positions.
- e) Involves students in community service activities.
- f) Students are better trained to enter work force.

C) Experiences and Opportunities for HOSA Members

HOSA members learn to be both leaders and followers. They learn how to plan activities, carry out activities, to participate in cooperative experiences, to preside at meetings, to serve as chairpersons for committees, to manage finances, to get group consensus for decision making, and most importantly, to acquire the realization of compromise for the good of the majority -- a trait often needed on the job.

Being successful in a vocation often takes more than occupational skills. It also takes social understanding of human relations. Human relations is difficult to teach in the classroom. Students need experiences in social settings to acquire the social intelligence needed to succeed in their jobs. Through HOSA conferences, workshops, and competitive events, students increase a sense of belonging, increase ability to adjust and increase the positive personality traits.

HOSA provides involvement and experiences with the community. Students can help to improve their community, learn to acknowledge the rights of others and develop useful citizenship habits by their involvement in community activities.

Through the awards and competitive events program, students receive motivation and recognition for their accomplishments. Competitions are conducted at the local, regional, state, and national levels and are directly related to the vocational

education programs in which the students are enrolled. Competitions are hands-on experiences with evaluation and judging done by individuals employed in the health field.

D) Operational Structure for HOSA

The local chapter is the foundation for the organization. Chapters are organized in the local high school or area vocational center based on the school's Health Occupations Education program. The Health Occupations Education teacher serves as the advisor for the local chapter. Local chapters elect student officers: President, Vice President, Secretary, Treasurer, Reporter, and Parliamentarian to lead the local chapter.

HOSA also has a regional structure within the State which provides geographical boundaries for leadership meetings and competitions. These six regions make up the State association which serves as the organization that coordinates, communicates, and plans activities. At the State level, students are also elected to office (President, State Vice President, and six Regional Vice Presidents) each year and their function is to plan and lead regional and State activities.

On the national level, Michigan HOSA is affiliated with the National Health Occupations Students of America. National HOSA provides materials for the various state organizations and plans and conducts a national conference for HOSA members and advisors.

HOSA has a State Advisory Board that provides direction for the State organization. This State Advisory Board is comprised of one teacher/advisor from each HOSA region.

E) Finances

In order for students and advisors to be considered members of HOSA they must pay annual membership dues. Generally, there are dues at the local, State, and national levels. The amount of the local dues is set at the local level while the State dues (\$2.00) and national dues (\$4.00) are set by the respective levels. Payment of dues can be the responsibility of each student or they can be paid by the local chapter through fund raising, school contributions, or support from business and industry.

Costs to attend regional, State, and national conferences and activities are the responsibility of the local chapter. These costs are generally paid from revenue earned through fund raising activities. There are many fund raising activities that can relate to the vocational program and, therefore, serve as a fund raiser as well as an educational activity.

Vocational education State aid added cost funds can be used to pay for teacher/advisor expenses (mileage, meals, lodging, etc.) to attend regional/State/national conferences and activities. These added cost funds cannot be used for student expenses. However, local districts may elect to pay all student expenses out of their general fund revenues.

F. Technical Assistance

The State Board of Education has approved funding for a project at Western Michigan University to provide the leadership for the operation of the Michigan HOSA organization. Western Michigan University's responsibilities are to prepare and distribute materials, plan conferences, plan and conduct competitive events, communicate with chapters, provide advisor inservice, etc.

For information about HOSA contact:

Mr. Paul Booden	OR	Mr. Charles Arensmeier
HOSA Project Director		Consultant
108 West Hall		Vocational-Technical
Western Michigan University		Education Service
Kalamazoo, MI 49008		P. O. Box 30009
		Lansing, MI 48909
(616) 383-4982		(517) 335-0361

XIV. REFERENCES

The Michigan Department of Education, Vocational-Technical Education Service has developed Health Occupations curriculum guides for the following occupational areas:

	<u>CIP CODE</u>
1. Dental Assisting	17.0100
2. Clinical Laboratory Assisting	17.0300 - Course 01
3. Histologic Technology	17.0300 - Course 02
4. Medical Office Assisting	17.0503
5. Nursing Assisting	17.0600 - Course 01
6. Home Health Aide	17.0600 - Course 03
7. Health Occupations Cluster	17.9900

To obtain curriculum guides and equipment lists specific to the program, contact:

Michigan Vocational Education Resource Center
133 Erickson Hall
Michigan State University
East Lansing, Michigan 48824-1034

Toll free in Michigan: 1-800-292-1606

XV. TECHNICAL ASSISTANCE

Additional information regarding the development and implementation of programs can be obtained by contacting Mrs. Luetisha Riddle, Vocational Health Occupations Education Consultant, Michigan Department of Education, Vocational-Technical Education Service, Box 30009, Lansing, Michigan 48909, at (517) 335-0372.

HOME ECONOMICS RELATED OCCUPATIONAL EDUCATION

I. DEFINITION

Home Economics Related Occupations (HERO) programs prepare individuals to participate in wage earning occupations which utilize a common body of knowledge and skills basic to home economics. Such programs will comprise that group of related courses and/or units of instruction designed to enable students to acquire knowledge and to develop attitudes and skills relevant to an occupation or occupational cluster.

II. OBJECTIVES

- A) The home economics wage earning program will be based upon the knowledge and skill competencies required of individuals for entry level jobs in an occupation or a cluster of occupations associated with one of the wage earning home economics programs.
- B) The wage earning home economics programs will be of sufficient duration and intensity to develop the necessary skills to prepare for job upgrading or advancement in that particular area.
- C) Vocational education in wage earning home economics programs is designed to serve persons who have entered upon and are preparing to enter work in child care, clothing management, interior treatment, food management, and building/home maintenance occupational areas.

III. INSTRUCTIONAL PROGRAMS/CONTENT

Content of wage earning home economics programs should be based on the skills required by business and industry for employment or advancement in the occupation and/or cluster of occupations. Curriculum guides and task lists are available at the Michigan Vocational Education Resource Center (see References).

- A) Child Care Services (20.0201). An instructional program that prepares individuals for occupations such as child care aide, teacher aide, special education aide, playroom attendant, licensed home operator, recreation/camp worker, assistant care giver, governor/governess. Instruction includes child growth and development activities, using discipline and guidance; organizing activities and program; using health and safety procedures; laws, regulations, and policies related to providing child care services.

- B) Clothing and Textile Management Production and Services (20.0301). An instructional program that prepares individuals for occupations such as alterationist, production sewer, power sewing machine operator, garment fitter, dressmaker, tailor, fabric tester. These may be clustered with drapery maker, slip cover maker, upholsterer, and dry cleaner. Instruction includes operation of commercial power sewing machines, measuring and fitting of patterns, alterations of ready-to-wear garments, cutting of fabric with commercial cutting equipment, construction, mass production, pressing, fabric testing and customer relations.
- C) Food Management, Production and Service (20.0401). An instructional program that prepares individuals for employment as a dining room attendant, waiter/waitress, cashier, kitchen helper, cook helper, short order cook, pantry goods maker, cook, dishwasher, baker's helper, pastry helper, stock clerk. Instruction includes preparing and serving quantity food, safety and sanitation, equipment operation and maintenance, and catering.
- D) Commercial Painting and Interior Treatment Services (20.0501). An instructional program that prepares individuals in the entire spectrum of interior and exterior treatment of homes and/or buildings. It includes instruction in the treatment of walls, windows, furnishings, and other client services. The program may consist of the following courses or cluster of courses and/or units of instruction:

Course 01:

Construction Painting and Decorating. Prepares individuals for employment as commercial painters, wallpaper hangers and furniture refinishers. It includes instruction in operation of power tools; industrial safety standards and procedures; applying decorative coating materials such as paint, lacquer, and wallpaper; scraping, burning and sanding a variety of surfaces; applying coating with brush, roller or spraygun; mixing and matching colors; and repairs.

Course 02:

Interior Furnishings Production. Prepares individuals for employment as drapery maker, slip cover maker, window dresser, decorator, salesperson. Instruction includes operating power tools and sewing machines; measuring, blocking and cutting; basic construction; window treatments, and accessory items; and performing customer services.

Course 03:

Upholstery. Includes instruction in installing, repairing, arranging, and securing springs, filler, padding; cutting, sewing and trimming; cushion filling, tufting, and buttoning; and leather working.

- E) Building and Home Maintenance and Services (20.0601). An instructional program that prepares individuals for employment as a custodian for schools, municipalities, and health care institutions; motel/hotel housekeeper, residential housekeeper and laundry operator. Instruction includes operation of power equipment and tools; use of cleaning agents and protective coatings; sanitation and disinfectants; care and cleaning of buildings, fixtures, furnishings including a variety of floor surfaces and wall coverings; performing building repairs, minor electrical repairs, basic grounds maintenance; and laundry.

IV. SPECIAL CONDITIONS

A) Criteria for Approval

Home Economics Related Occupations Programs will:

1. Be based on a review of employment data in determining justification for each program.
2. Be based on the skills required by business and industry for employment in the occupation and/or cluster of occupations.
3. Use facilities and equipment, materials and resources comparable to those in business and industry.
4. Provide classroom and laboratory time to be of sufficient length to develop the skills necessary to become employable. The minimum requirement is two consecutive periods of not less than 550 minutes per week.
5. Make provisions for job placement and follow-up for each student completing the program.

V. ADVISORY COMMITTEES

All state approved vocational education programs are required to make use of an occupational or craft advisory committee composed primarily of persons from business, industry, and labor knowledgeable in that specialized occupational area. Craft advisory committees can help provide assistance in the development, promotion, operation, evaluation, and maintenance of vocational education programs. Craft advisory committees may be established to serve an occupational program or closely related cluster of programs on a building, district, multi-district, or CEPD arrangement. Local conditions will dictate the most effective and efficient structure to establish. Additional information regarding advisory committees can be found in Tab II, Section I, of the Administrative Guide for Vocational-Technical Education in Michigan.

VI. TEACHER CERTIFICATION

All persons teaching a state approved vocational education program are required to be vocationally certified. The Michigan Department

of Education publication entitled, "Administrative Manual - Vocational Teacher Certification," provides detailed information concerning vocational certification requirements. This document may be obtained by writing to the Michigan Department of Education Teacher Preparation and Certification Service, P. O. Box 30008, Lansing, MI 48909, telephone: (517) 373-3310. Questions pertaining to vocational certification should be directed to the above address or telephone number.

VII. PROGRAM SEQUENCING

- A) Suggested Program Sequence. The suggested sequence for trainees includes prevocational education focusing on career awareness, occupational explanation and three levels of job training skills.

Pre-Vocational	Exploration	Skill I	Skill II	Skill III
Lead-in courses with Career Awareness emphasis	Introductory courses such as: Child Development, Foods I, Clothing I, Home Furnishings, Home Management	Training with experience (in-school laboratory experience)	On-the-job experiences and/or co-op training including related course	Program follow-up in area centers, community colleges, private trade schools
(7-8-9)	(9-10-11)	(11-12)	(12)	

Students may exit jobs following each level of skill training.

VIII. FACILITIES AND EQUIPMENT

Instructional areas for wage earning home economics programs are categorized as "heavy laboratory." The equipment (ranges, large motor skills play equipment, power sewing machines) is relatively heavy and the physical circulation is heavy.

- A) Facilities. The following ranges for square feet per pupil per CIP Code Number reflect the housing needs of students for skill-training. Caution: If you are pursuing an innovative approach in any one of these areas, it may require other space allocations. If so, please refer to the School Plant Planning Handbook, Bulletin No. 412, Supplement, Planning Occupational Education Facilities, found in Tab II, Section O, of the Administrative Guide for Vocational-Technical Education in Michigan.

HOME ECONOMICS OCCUPATIONAL PROGRAMS

		Per Pupil	
		<u>Square Foot</u>	<u>Range</u>
		Minimum	Optimum
20.0201	Child Care Services	80	100
20.0301	Clothing and Textiles Management, Production and Services	80	100
20.0401	Food Management, Production and Services	130	150
20.0501	Commercial Painting and Interior Treatment	80	100
20.0601	Building Home Management and Supporting Services	80	100

All program offerings should be developed in depth prior to initiating the design of the facility. It is important to insure a building that will complement and not compromise the activities which take place within it.

- B) Equipment. Equipment lists for each of the home economics occupational areas may be obtained from the Michigan Vocational Education Resource Center at Michigan State University. The toll free number is 1-800-292-1606.

IX. CLASS TIME

Class and laboratory time shall be of sufficient depth to develop the competencies necessary to prepare the trainee for employment. The minimum requirements are two consecutive class periods of not less than 550 minutes per week.

X. COOPERATIVE METHOD

Cooperative education is a method of instruction that combines work-related learning experiences available in the community with vocational instruction provided in an educational institution.

The essential elements of cooperative education programs include:

- A) Alternate or parallel periods of instruction in school and supervised public or private employment,
- B) A written training agreement among the school, an employer, and a student,
- C) Vocational instruction (including required academic instruction) related to the job and the student's academic study or career goals,

- D) Carefully planned alternation of study and work supervised to further the student's education and employability, and
- E) The student's employment and compensation in compliance with federal, state and local laws.

See Tab II, Section J, of the Administrative Guide for Vocational-Technical Education in Michigan for additional information.

XI. VOCATIONAL STUDENT ORGANIZATION

A vocational student organization is an integral part of a high quality home economics related education program. All programs are encouraged to operate Future Homemakers of America-Home Economics Related Occupations (FHA-HERO) chapters as an intracurricular component.

A) The purposes of FHA-HERO are as follows:

1. To encourage the development of occupational skills, knowledges, and abilities to a high level of proficiency.
2. To develop leadership ability through participation in educational, vocational, civic, recreational, and social activities.
3. To develop character and to prepare members for useful citizenship and foster patriotism.
4. To motivate students and vitalize the instructional program.
5. To develop and strengthen the confidence of young people in themselves and their work.
6. To unite in a common bond without regard to race, creed, or national origin, students with similar career objectives.
7. To assist students in refining their career objectives through realistic training.
8. To develop a sense of social acceptability and individual responsibility toward the home and community.
9. To encourage scholastic improvement and school loyalty.
10. To foster a deep respect for the dignity of all work.

B) There are many benefits to the students, teachers, schools and communities who participate in the student organizations.

1. Benefits to Students:

- a) Provides incentives to improve personal and occupational skills.

- b) Provides career awareness and exploration activities.
- c) Provides leadership development opportunities.
- d) Provides activities to develop civic understanding and responsibility.
- e) Provides an opportunity to meet with business and industry leaders and students with similar backgrounds and career interests.

2. Benefits to Teachers:

- a) Motivates students.
- b) Publicizes vocational program.
- c) Provides opportunities to meet and work with vocational teachers in the same occupational area.
- d) Provides an established recognition program with awards for student achievement.
- e) Provides opportunities to meet and work with leaders in business, industry, and education.

3. Benefits to School/Community:

- a) Publicizes school and community.
- b) Creates school spirit.
- c) Develops pride in school and community.
- d) Provides students with leadership skills for future leadership positions.
- e) Involves students in community service activities.
- f) Students better trained to enter work force.

C) Experiences and Opportunities for FHA-HERO Members

FHA-HERO members learn to be both leaders and followers. They learn how to plan activities, carry out activities, to participate in cooperative experiences, to preside at meetings, to serve as chairpersons for committees, to manage finances, to get group consensus for decision making, and most importantly, to acquire the realization of compromise for the good of the majority -- a trait often needed on the job.

Being successful in a vocation often takes more than occupational skills. It also takes social understanding of human relations. Human relations is difficult to teach in the classroom. Students need experiences in social settings to acquire the social intelligence needed to succeed in their jobs.

Through FHA-HERO conferences, workshops, and action events, students increase sense of belonging, increase ability to adjust and increase the positive personality traits.

FHA-HERO provides involvement and experiences with the community. Students can help to improve their community, learn to acknowledge the rights of others and develop useful citizenship habits by their involvement in community activities.

Through the awards and action events program, students receive motivation and recognition for their accomplishments. Action events are conducted at the local, regional, state, and national levels and are directly related to the vocational education programs in which the students are enrolled. Action events are hands-on experiences with evaluation and judging done by individuals employed in home economics and related areas.

D) Operational Structure for FHA-HERO

The local chapter is the foundation for the organization. Chapters are organized in the local high school or area vocational center based on the school's home economics and related education program. The home economics education teacher serves as the advisor for the local chapter. Local chapters elect student officers: President, Vice President, Secretary/Treasurer, Reporter, Parliamentarian, Vice President of Degrees (Points), Vice President of Program, and Vice President of Recreation to lead the local chapter.

FHA-HERO also has a regional structure within the State which provides geographical boundaries for leadership meetings and competitions. These eight regions make up the State association which serves as the organization that coordinates, communicates, and plans activities. At the State level, students are also elected to office (President, First Vice President, Vice President of Hero, Vice President of Program, Vice President of Public Relations, Vice President of Evaluation, Secretary/Treasurer, and Parliamentarian) each year and their function is to plan and lead regional and State activities.

On the National level, Michigan FHA-HERO is affiliated with National FHA-HERO. National FHA-HERO provides materials for the various state organizations and plans and conducts a national conference for FHA-HERO members and advisors.

FHA-HERO has a teacher/advisor committee that provides direction for the State organization. The State advisory committee is composed of one teacher/advisor from each region plus three State Officers and their advisors.

E) Finances

In order for students and advisors to be considered members of FHA-HERO they must pay annual membership dues. Generally, there are dues at the local, state, and national levels. The

amount of the local dues is set at the local level while the State dues (\$2.00) and national dues (\$4.00) are set by the respective levels. Payment of dues can be the responsibility of each student or they can be paid by the local chapter through fund raising, school contributions, or support from business, industry, and education.

Costs to attend regional, State, and national conferences and activities are the responsibility of the local chapter. These costs are generally paid from revenue earned through fund raising activities. There are many fund raising activities that can relate to the home economics related program and, therefore, serve as a fund raiser as well as an educational activity.

Vocational education State aid added cost funds can be used to pay for teacher/advisor expenses (mileage, meals, lodging, etc.) to attend regional/State/national conferences and activities. These added cost funds cannot be used for student expenses. However, local districts may elect to pay all student expenses out of their general fund revenues.

F. Technical Assistance

The State Board of Education has approved funding for a project at Michigan State University to provide the leadership for the operation of the Michigan FHA-HERO organization. Michigan State University's responsibilities are to prepare and distribute materials, plan conferences, plan and conduct action events, communicate with chapters, provide advisor inservice, etc.

For information about FHA-HERO contact:

Ms. Darlene Clark Gordon	OR	Mr. Charles Arensmeier
FHA-HERO Project Director		Consultant
106 Wills House		Vocational-Technical
Michigan State University		Education Service
East Lansing, MI 48824		P. O. Box 30009
		Lansing, MI 48909
(517) 355-7662		

(517) 335-0361

XII. REFERENCES

The following documents are available from the Michigan Vocational Education Resource Center, 133 Erickson Hall, Michigan State University, East Lansing, Michigan 48824. Michigan toll-free telephone #1-800-292-1606.

Curriculum Guides available for Child Care Services; Food Production and Services; and Clothing and Textile Production and Services (Spring, 1984). Task lists are available for Commercial Painting and Interior Treatment Services; and Building and Home Maintenance and Services.

Equipment lists available for all five occupational programs.

"The Vocational Cooperative Education Handbook."

"Public Relations Guide" "For Vocational Educator" - HERO brochures for counselors, students, parents, and employers.

"Making The Most of Your HERO Program: An Evaluation Guide."

XIII. TECHNICAL ASSISTANCE

For additional assistance contact:

- | | |
|---|--|
| 1. Naomi Bryson, Ed.D.
Consultant, Home Economics
Related Occupations
Michigan Dept. of Education
Vocational-Technical
Education Service
P. O. Box 30009
Lansing, MI 48909

(517) 335-0364 | 2. Darlene Clark Gordon
FHA-HERO student organization
Project Consultant
106 Wills House
Michigan State University
East Lansing, MI 48824

(517) 355-7662 |
|---|--|

INDUSTRIAL ARTS/TECHNOLOGY EDUCATION

I. DEFINITION

Industrial Arts/Technology Education programs are those educational programs which: (a) pertain to the body of related subject matter, or related courses, organized for the development of understanding about all aspects of industry and technology, including learning experiences involving activities such as experimenting, designing, constructing, evaluating and using tools, machines, materials and processes; and (b) assist individuals in making informed and meaningful occupational choices or which prepare them for entry into advanced trade and industrial or technical education programs.

II. OBJECTIVES

To develop in each student a(an):

- A. Comprehension of the processes by which technology functions. This includes small components such as mechanisms and electronics, as well as large ones such as construction, manufacturing and distribution.
- B. Familiarity with important large scale systems (including vocabulary and major concepts) such as power systems, communication networks, computer systems and transportation systems.
- C. Knowledge of human factors in the innovation, operation, invention and engineering of technological components.
- D. Appreciation for the products of technology and their impact on the improvement of life conditions.
- E. Ability to analyze and evaluate controversies over science and technology.
- F. Knowledge of assessments of technology; this includes technology prediction, and the impacts of technology on society.
- G. Awareness of social impacts on technology, human factors in systems operation, and quality of work life.
- H. Perception of social problems associated with technology which include pollution, technological accidents, technological crime, job displacement and population shifts; and interpreting how society responds.

- I. Knowledge of and appreciation for the utilization of appropriate technology.
- J. Concern for the quality of manufactured and constructed products, of the operation of systems, and of services performed.
- K. Knowledge of the history of technology; this includes familiarity with the literature and other sources of information about technology.
- L. Understanding of issues and ethics relating to technology such as environment, bioethics and engineering ethics.
- M. Understanding of industry and its place in our culture.
- N. Ability to use problem solving skills relating to materials and processes.
- O. Ability to use common tools and machines safely.
- P. Ability to use creative technical talents.
- Q. Understanding of careers and opportunities related to technology and industry.

III. FUNDING

Presently, there are no funds available for the reimbursement of local programs, teachers or equipment. Since 1980, vocational funds have been used to provide Industrial Arts/Technology teachers with professional development activities. These sessions are designed to assist the teachers in updating their technical skills and knowledge so that program relevancy can be maintained. In addition, new program activities and directions are presented. Vocational funds have also been used to support curriculum development in the Industrial Arts/Technology area.

IV. PROGRAM EVALUATION

Voluntary program evaluation has been supported through the completion of the "Michigan Standards for Industrial Arts Programs", developed by the M.I.E.S. (Michigan Industrial Education Society) in 1982. The standards document is designed

for use as a program assessment instrument to assist school personnel in identifying program strengths and weaknesses. The standards also provide a means of constructing a program profile and dealing with program deficiencies. A second set of program standards were completed 1985 by the International Technology Education Association (I.T.E.A. formerly A.I.A.A.). These are similar in design to the first but are especially designed for programs of a greater "technological" focus.

V. REFERENCES

- A. Michigan Standards for Industrial Arts Programs, The Michigan Industrial Education Society, 1982.
- B. Standards for Technology Education Programs, The International Technology Education Association, 1985.
- C. The Annual and Long Range State Plan for Vocational Education in Michigan, Michigan Department of Education, 1983-87.

For assistance and information relating to Industrial Arts/Technology programs contact:

James Rudnick
Industrial Arts Consultant
Michigan Department of Education
P. O. Box 30009
Lansing, Michigan 48909
(517) 373-6731

MARKETING EDUCATION

I. DEFINITION

Marketing Education

Marketing education programs prepare individuals for occupations directed toward the flow of industrial and consumer goods in channels of trade, or the provision of services to consumers or users. These programs are concerned with marketing, sales, distribution, merchandising, and management, including ownership and management of enterprises engaged in marketing.*

II. OBJECTIVES

There are several commonly accepted objectives for marketing education programs. They are as follows:**

- 1) To prepare students for employment and/or continuing education in the field of marketing.
- 2) To provide students with an understanding and appreciation of the American private enterprise system.
- 3) To provide students with an understanding of the contribution of marketing to the social and economic welfare of our nation.
- 4) To provide students with an awareness of the civic and social responsibilities of business to society.
- 5) To encourage and promote the use of ethical standards in marketing.
- 6) To stimulate student interest in marketing.
- 7) To prepare marketing personnel to satisfy the needs and wants of consumers.
- 8) To provide training that results in increased efficiency in marketing.

*Malitz, Gerald S., A Classification of Instructional Programs, National Center for Education Statistics, Washington, D.C., February 1981, p.56.

**Lucas, Stephen and Miles, Benton, The Development of Standards for Secondary Distributive Education Programs, Research Study, American Vocational Association, Arlington, VA, 1978, p. 12-14.

- 9) To contribute to the improvement of the techniques in marketing.
- 10) To adapt marketing practices and procedures to societal, economic, technical, and educational developments.
- 11) To advance the goals of the total educational program.
- 12) To develop among employers, employees, and consumers a greater appreciation of the value of trained personnel in marketing occupations.

III. INSTRUCTIONAL PROGRAMS

Instructional programs specified for marketing emphasize product or service categories by industry area. Secondary programs are funded under the program title Marketing, CIP Code 08.0700 - General Marketing, since students study unique product/service competencies within a cluster of closely related occupations. Individual courses by industry area can be approved in cases of sufficient student need and enrollment. Current secondary program and course codes for this instructional area are as follows:

<u>CIP Code</u>	<u>Program Description</u>
08.0700	<u>Course 01</u> <u>General Marketing.</u> Instructional programs that prepare individuals to perform marketing and management functions and tasks that can be applied broadly in any marketing environment. Principles, practices, and procedures are taught without particular identification with a specific kind of enterprise, product, or service. Extensive knowledge of a trade, product, or service area may have been already acquired by persons enrolled, either by prior training or employment experience; others may desire marketing skills for application in any enterprise or subsequent specialized training in marketing. The focus for these instructional programs may be on institutions of marketing, on specific marketing functions, or on unique kinds of marketing activity. General Marketing is the title given to preparatory courses in marketing. <u>Course 02</u> <u>Apparel and Accessories Marketing.</u> Instructional programs that prepare individuals to perform marketing functions

(cont.)

and tasks in retail establishments, wholesale establishments, and manufacturing firms primarily engaged in the marketing of clothing and related articles for personal wear and adornment. Students enrolled in an apparel and accessories course have an expressed interest or are typically employed in apparel and accessories departments and/or clothing, shoe, and jewelry departments and/or stores.

Course 03

Business and Personal Services Marketing.

A group of instructional programs that prepares individuals to perform marketing functions and tasks in two types of enterprises: those primarily engaged in providing services to businesses on a fee or contract basis (such as advertising agencies, publishing and broadcasting companies, display services, marketing research and consulting firms, protection agencies, building maintenance firms, and employment agencies), and those providing services to consumers (such as photography studios, barber and beauty shops, gymnasiums, funeral homes, home maintenance firms, pet care centers, and rental business other than vehicle). These programs place emphasis on the marketing activities involved in such enterprises and not on the development of manual or procedural skills that are required to perform a particular service or task. Includes instruction in preparing individuals to perform advertising and merchandise display functions as part of the operation of any enterprise. Students enrolled in a business and personal services marketing course have an expressed interest or are typically employed in advertising or display services.

Course 04

Financial Services Marketing. A group of instructional programs that prepare individuals to perform marketing functions and tasks, in financial institutions such as commercial banks, savings and loan associations, credit

(cont.)

agencies, credit unions, consumer-finance companies, collection agencies, security and commodity brokerages, and credit departments of business enterprises. Students enrolled in a financial services marketing course have an expressed interest or are typically employed in a retail credit department, bank, or credit union.

Course 05

Floristry, Farm, and Garden Supplies Marketing. A group of instructional programs that prepare individuals to perform marketing functions and tasks in retail, wholesale, and manufacturing establishments; and with growers dealing with live plants, cut flowers, floral arrangements, artificial flowers and plants, garden supplies, equipment, and related items; and seed, fertilizers, and other supplies for farm production. Students enrolled in a floristry, farm, and garden supplies marketing course have an expressed interest or are typically employed in a floral or farm and garden supply business enterprise.

Course 06

Food Marketing. A group of instructional programs that prepare individuals to perform marketing functions and tasks in retail and wholesale establishments, and in food processing and manufacturing firms that deal primarily with food and beverage products for either home preparation and consumption, or for use in commercial and institutional food service installations. Students enrolled in a food marketing course have an expressed interest or are typically employed in a convenience or specialty food store or a supermarket operation.

Course 07

Home and Office Products Marketing. A group of instructional programs that prepares individuals to perform marketing functions and tasks in retail establishments, wholesale establishments, and manufacturing firms dealing with hardware and building material products and equipment primarily used for furnishing and maintaining the

(cont.)

home; products, equipment and supplies used in public and private business office operations. Students enrolled in a home and office products marketing course have an expressed interest or are typically employed in a hardware, floor and wall covering, building, supplies, furniture or appliance department store.

Course 08

Hospitality and Recreation Marketing. A group of instructional programs that prepare individuals to perform marketing and management functions and tasks in any business enterprise primarily engaged in satisfying the desire of people to make productive or enjoyable use of leisure time. The hospitality industry includes lodging services and related convention services, and food and beverage services. Recreation includes products and services related to entertainment, sports, hobbies, and cultural activities. Students enrolled in hospitality and recreation marketing courses have an expressed interest or are typically employed in a restaurant, hotel/motel, or sporting goods department or store.

Course 09

Transportation and Travel Marketing. A group of instructional programs that prepare individuals to perform marketing and management functions and tasks in enterprises engaged in passenger and freight transportation, travel services, warehousing, and other services incidental to transportation, storage, travel, or tourism. Students enrolled in a transportation and travel marketing course have an expressed interest or are typically employed in travel services, warehousing, or other services incidental to transportation, storage, travel, or tourism.

Course 10

Vehicles and Petroleum Marketing. A group of instructional programs that prepare individuals to perform marketing and management functions and tasks in retail or wholesale establishments engaged in the distribution of petroleum

(cont.)

products, or in retail, wholesale, manufacturing, and service establishments engaged in the marketing of cars, vans, trucks, mobile units, boats, other recreational vehicles, tractors, and other farm vehicles and implements, as well as related parts, accessories, equipment, and services.

IV. INSTRUCTIONAL CONTENT

Marketing education programs contain two broad categories of instruction, called Instructional Elements. These two elements are labelled Foundations for Marketing and Functions of Marketing.

A) The Foundations for Marketing element is organized into three Instructional Areas:

1. Economic Foundations
2. Human Resource Foundations
3. Marketing and Business Foundations

B) The Functions of Marketing element is organized into nine Instructional Areas:

1. Distribution
2. Financing
3. Marketing-Information Management
4. Pricing
5. Product/Service Planning
6. Promotion
7. Purchasing
8. Risk Management
9. Selling

Definitions for each instructional area and topics included in the instructional area follow:

C) Foundations for Marketing

1. Economic Foundations

Basic economic principles and the concepts of free enterprise and free-market economics that are fundamental to an understanding of market activities. Topics include:

- a) Basic economic concepts
- b) Economic systems
- c) Cost-profit relationships
- d) International concepts (of trade and interdependency)
- e) Economic trends and indicators

2. Human Resource Foundations

Basic skills and understandings critical to success in many occupations, particularly those that may be viewed as pre- or co-requisites for the study of marketing in a vocational context. Topics include:

- a) Mathematics
- b) Communication
- c) Self-understanding
- d) Interpersonal skills
- e) Career development
- f) Human resource management

3. Marketing and Business Foundations

Basic skills and understanding of the marketing concept and the business environment and management systems within which it is implemented. Topics include:

- a) Functions of business
- b) Ownership structures
- c) Marketing functions and concepts
- d) Channels
- e) Management functions
- f) Budget considerations
- g) Business operations
- h) Specialized applications of business operations

D) Functions of Marketing

1. Distribution

Activities associated with the physical movement or transfer of ownership of a product or service from producer to consumer. Topics include:

- a) Components of the distribution decision
- b) Nature of channels and channel members
- c) Controlling distribution and coordinating channel relationships
- d) Wholesale, retail, and specialist business activities and function
- e) Inventory management and control
- f) Transportation
- g) Bulk packaging
- h) Storing
- i) Receiving processes
- j) Management of the distribution function

2. Financing

Determining the need for and availability of financial resources to facilitate marketing activities. Topics include:

- a) Budgeting for financial needs
- b) Sources of capital
- c) Obtaining business credit
- d) Extending credit to consumers and to other organizations
- e) Management of financial activities

3. Marketing-Information Management

Procedures and methods for the continuous gathering, analyzing, and disseminating of information to facilitate marketing decisions. Topics include:

- a) Need for marketing information and uses of information system
- b) Use of the scientific method in problem-solving
- c) Forecasting
- d) Conducting research (primary and secondary)
- e) Analyzing and reporting research
- f) Using appropriate technology
- g) Management of the marketing-information system

4. Pricing

Determining an exchange price for the goods or service at which buyer and seller perceive optimum value. Topics include:

- a) Pricing objectives, strategies, and techniques
- b) External pricing considerations
- c) Determining selling prices
- d) Adjusting selling prices
- e) Implications of credit on price
- f) Management of the pricing function

5. Product-Service Planning

The process of developing the product or service mix in response to market opportunities. Topics include:

- a) Market opportunity analysis
- b) New product/service planning
- c) Components of the product/service mix
- d) Quality assurance, grades and standards, warranties, and guarantees
- e) Product/service positioning and image

- f) Product/service performance evaluation
- g) Management of the product/service planning function

6. Promotion

Communicating information about products, services, image, and/or ideas to influence consumer behavior. Topics include:

- a) The communication process
- b) The promotional mix
- c) Promotional planning
- d) Management of the promotion function

7. Purchasing

Planning and procedures necessary to obtain goods and services for use in the business or for resale. Topics include:

- a) Determining purchase needs
- b) Identifying sources
- c) Purchasing activities
- d) Management of the purchasing function

8. Risk Management

Managing marketing activities to optimize the relationships of potential loss to gain. Topics include:

- a) Pure and speculative risk
- b) Controllable and uncontrollable factors
- c) Insurable and uninsurable risks
- d) Security and safety considerations
- e) Management of the variables associated with risk

9. Selling

Responding to consumer needs and wants through planned, personalized communication in order to influence purchase decisions and ensure satisfaction. Topics include:

- a) Understanding customers/clients
- b) Processes and techniques of selling
- c) Time and activity planning
- d) Knowledge of product and service
- e) Supporting activities
- f) Management of the selling function

Student instruction in each instructional area is based upon task analysis of individual marketing occupations.

The State of Michigan through the Michigan Department of Education, Vocational-Technical Education Service area, is a member state of the Interstate Distributive Education Curriculum Consortium (IDECC). IDECC is a national curriculum development and research center for marketing education. IDECC provides a variety of instructional materials to classroom teachers developed through a carefully controlled research process based upon task analysis. Product and consortium information about IDECC can be obtained by writing:

IDECC - The Ohio State University
1564 West First Avenue
Columbus, OH 43212
(614) 486-6708

V. SPECIAL CONDITIONS

The two instructional methods used to prepare individuals with the necessary competencies for employment and/or continuing education in marketing occupations are the (A) Project Method and (B) Cooperative Method.

A) Project Method

The project method involves individually designed learning activities which are coordinated with classroom instruction and related to a student's career interest. There are three types of the Project Method of training:

1. In-School Laboratory Experience:

An in-school laboratory can be organized either as (a) a model store or (b) a student-run school store.

- a) A model store is a marketing laboratory which simulates a store setting and is equipped with appropriate equipment, merchandise, etc., but does not sell merchandise to the student body, i.e. simulated supermarket, simulated fashion boutique.
- b) A student-run school store is a marketing laboratory that serves as an actual business operation. The students operate and manage the store which sells merchandise and services to students, faculty, and others. Program sales are used to maintain, expand and improve the existing marketing program.

2. Directed Occupational Experience:

Directed occupational experience utilizes a business establishment in a downtown, neighborhood shopping center or

mall as a training laboratory. The non-paid experience is generally short-term in nature varying from a few hours to a few weeks. Students rotate positions within a specific establishment or several different business establishments. This method is used to explore major activities in distribution or to provide a "hands-on" approach to training.

3. DECA (Distributive Education Clubs of America):

DECA is a co-curricular component of marketing education programs. DECA motivates students through group and individualized instructional projects, competency based competitive events and leadership training activities. See Section XII for additional information about DECA activities. Information can also be obtained by Michigan DECA, 204B Sill Hall, Eastern Michigan University, Ypsilanti 48197

Many marketing programs combine elements of all three methods in preparing students for marketing occupations. The successful program should be flexible enough to utilize a variety of methods to maintain student enthusiasm, interest, and desire to succeed in marketing.

B) Cooperative Method

The cooperative method is the coordination of vocational instruction with on-the-job learning experiences related to a student's instruction in school. Such regular part-time employment enables the student to apply the vocational instruction on the job. For further information, see Section XI.

VI. ADVISORY COMMITTEES

All State approved vocational education programs are required to make use of an occupational or craft advisory committee composed primarily of persons from business, industry, and labor knowledgeable in that specialized occupational area. Craft advisory committees can help provide assistance in the development, promotion, operation, evaluation and maintenance of vocational education programs. Craft advisory committees may be established to serve an occupational program or closely related cluster of programs on a building, district, multi-district, or CEPD arrangement. Local conditions will dictate the most effective and efficient structure to establish. Additional information regarding advisory committees can be found in Tab II, Section I of the Administrative Guide for Vocational-Technical Education in Michigan.

VII. TEACHER CERTIFICATION

All persons teaching a state approved vocational education program are required to be vocationally certified. The Michigan Department of Education publication entitled, "Administrative Manual - Vocational Teacher Certification," provides detailed information concerning vocational certification requirements. This document may be obtained by writing to the Michigan Department of Education, Teacher Preparation and Certification Service, P.O. Box 30008, Lansing, Michigan 48909, telephone: (517) 373-3310. Questions pertaining to vocational certification should be directed to the above address or telephone number.

VIII. PROGRAM SEQUENCING

Employment in marketing can be conceptualized in levels from simple to complex in terms of assigned responsibilities and extent of skills and knowledge required. The occupational requirements for each level of employment guide the identification of instructional objectives and learning activities. The marketing activities which take place at each level of employment can still be classified in the broad categories of marketing functions, but the activities vary in complexity from level to level. Prebaccalaureate marketing education is directed to instruction at the first five levels of marketing employment.

Entry-Level marketing occupations involve standard or routine activities with limited need for decision-making skills. These jobs may be obtained by individuals with no previous marketing education, experience or commitment to a marketing career. Competencies required to secure and hold such a job address good personal appearance, general business behavior, and basic skills such as math and communications.

Career-sustaining Level of marketing occupations involves performing more complex duties, using routine decision-making skills, and limited control of one's own working environment. Individuals in a career-sustaining level job should have a basic understanding of the marketing concept and its foundations and have indicated an initial interest in marketing as a potential career.

Marketing Specialist occupations involve frequent use of decision-making and leadership skills. Jobs at this level require mastery of marketing skills across functions or extensive technical knowledge/skill in one function. Individuals in a marketing specialist occupation need to have a thorough understanding of the marketing concept and its functions.

Marketing Supervisor involves a high level of competence in decision making and leadership. Individuals in this role are responsible for planning, coordinating, and supervising people. They may also be involved in the planning, coordinating, and supervising of marketing-related activities.

Manager-Entrepreneur implies competence in a variety of tasks related to owning one's own business or managing a department within an organization. Individuals at this level are fully responsible for the success or failure of a unit within an organization or of a small business enterprise. A comprehensive understanding of marketing and management competencies is required to function in this role.

There are higher levels of employment in marketing which involve the preparation of individuals for top-level positions such as executives of large companies. These positions usually require baccalaureate degrees or extensive experience and thorough comprehension of the theories of marketing and their application to corporate activity.

Secondary marketing education programs should be organized around and address the career-sustaining and marketing specialist levels of the marketing occupation.

IX. FACILITIES AND EQUIPMENT

Marketing education programs are classified as medium laboratories requiring 80 to 100 square feet per student. Square footage in a marketing laboratory includes classroom, work area, storage, display, and school store space requirements. For additional information regarding educational specifications and store organization, please consult a Vocational-Technical Education Service publication entitled, The School Store...Making It Work which is available from the Michigan Vocational Education Resource Center, Michigan State University, 133 Erickson Hall, East Lansing, Michigan 48824, Telephone 1-800-292-1606 or 517+353-4397. Additional information on facilities is presented in the School Plant Planning Handbook, Bulletin 412 Supplement, found in Tab II, Section O of the Administrative Guide for Vocational-Technical Education in Michigan.

X. INSTRUCTIONAL TIME

Preparatory programs utilizing the project method in marketing offer instruction which prepares students for job entry within the occupational area and are approved for two or more class periods in length. The two or more class periods do not need to be consecutive in length.

Co-op related programs for students who are currently employed in marketing must be at least one class period in length and must be taken in conjunction with on-the-job learning experience.

XI. COOPERATIVE EDUCATION

Cooperative education is a method of instruction that combines work-related learning experiences available in the community with vocational instruction provided in an educational institution.

The essential elements of cooperative education programs include:

- A) Alternate or parallel periods of instruction in school and supervised public or private employment,
- B) A written training agreement among the school, an employer, and a student,
- C) Vocational instruction (including required academic instruction) related to the job and the student's academic study or career goals,
- D) Carefully planned alternation of study and work supervised to further the student's education and employability, and
- E) The student's employment and compensation in compliance with federal, state, and local laws.

See Tab II , Section J of the Administrative Guide for Vocational-Technical Education in Michigan for additional information.

XII. VOCATIONAL STUDENT ORGANIZATIONS

A vocational student organization is an integral part of a high quality marketing education program. All programs are encouraged to operate Distributive Education Clubs of America (DECA) chapters as a co-curricular component.

- A) The purposes of DECA are as follow:
 - 1. To encourage the development of occupational skills, knowledges, and abilities to a high level of proficiency.
 - 2. To develop leadership ability through participation in educational, vocational, civic, recreational, and social activities.
 - 3. To develop character and to prepare members for useful citizenship and foster patriotism.
 - 4. To motivate students and vitalize the instructional program.

5. To develop and strengthen the confidence of young people in themselves and their work.
 6. To unite in a common bond without regard to race, creed, or national origin, students with similar career objectives.
 7. To assist students in refining their career objectives through realistic training.
 8. To develop a sense of social acceptability and individual responsibility toward the home and community.
 9. To encourage scholastic improvement and school loyalty.
 10. To foster a deep respect for the dignity of all work.
- B) There are many benefits to the students, teachers, schools and communities who participate in the student organizations.
1. Benefits to Students:
 - a) Provides incentive to improve personal and occupational skills.
 - b) Provides career awareness and exploration activities.
 - c) Provides leadership development opportunities.
 - d) Provides activities to develop civic understanding and responsibility.
 - e) Provides an opportunity to meet with business and marketing leaders and students with similar backgrounds and career interests.
 2. Benefits to Teachers:
 - a) Motivates students.
 - b) Publicizes the vocational program.
 - c) Provides opportunities to meet and work with vocational teachers in the same occupational area.
 - d) Provides an established recognition program with awards for student achievement.
 - e) Provides opportunities to meet and work with leaders in business, marketing, and education.

3. Benefits to School/Community:

- a) Publicizes the school and community.
- b) Creates school spirit.
- c) Develops pride in the school and community.
- d) Provides students with leadership skills for future leadership positions.
- e) Involves students in community service activities.
- f) Students are better trained to enter the work force.

C) Experiences and Opportunities for DECA Members

DECA members learn to be both leaders and followers. They learn how to plan activities, carry out activities, to participate in cooperative experiences, to preside at meetings, to serve as chairpersons for committees, to manage finances, to get group consensus for decision making, and most importantly, to acquire the realization of compromise for the good of the majority -- a trait often needed on the job.

Being successful in a vocation often takes more than occupational skills. It also takes social understanding of human relations. Human relations is difficult to teach in the classroom. Students need experiences in social settings to acquire the social intelligence needed to succeed in their jobs. Through DECA conferences, workshops, and competitive events, students increase the sense of belonging, increase the ability to adjust, and increase the positive personality traits.

DECA provides involvement and experiences with the community. Students can help to improve their community, learn to acknowledge the rights of others and develop useful citizenship habits by their involvement in community activities.

Through the awards and competitive events program, students receive motivation and recognition for their accomplishments. Competitions are conducted at the local, district, state, and national levels and are directly related to the vocational education programs in which the students are enrolled. Competitions are hands-on, competency-based experiences with evaluation and judging done by individuals from the marketing field.

D) Operational Structure for DECA

The local chapter is the foundation for the organization. Chapters are organized in the local high school or area vocational center based on the school's marketing education program. The marketing education teacher serves as the advisor for the local chapter. Local chapters elect student officers: President, Vice President, Secretary, Treasurer, and Historian to lead the local chapter.

DECA also has a district structure within the State which provides geographical boundaries for leadership meetings and competitions. These nine districts make up the State association which serves as the organization that coordinates, communicates, and plans activities. At the State level, students are also elected to office (President, Vice President, Secretary, Treasurer, Historian, and nine District Vice Presidents) each year and their function is to plan and lead district and State activities.

On the National level, Michigan DECA is affiliated with National DECA. National DECA provides materials for the various state organizations and plans and conducts a national Career Development Conference for DECA members and advisors.

DECA has a teacher/advisor committee that provides direction for the State organization. This State advisory committee (one teacher/advisor from each district) advises on the overall operation of the organization. In addition, DECA has a State Advisory Board comprised of individuals from business, industry, and education that provides financial, educational, and operational support to many activities.

E) Finances

In order for students and advisors to be considered members of DECA they must pay annual membership dues. Generally, there are dues at the local, state, and national levels. The amount of the local dues is set at the local level while the State dues (\$2.00) and national dues (\$4.00) are set by the respective levels. Payment of dues can be the responsibility of each student or they can be paid by the local chapter through fund raising, school contributions, or support from business and industry.

Costs to attend district, State, and national conferences and activities are the responsibility of the local chapter. These costs are generally paid from revenue earned through fund raising activities. There are many fund raising activities that can relate to the marketing program and, therefore, serve as a fund raiser as well as an educational activity.

Vocational education State aid added cost funds can be used to pay for teacher/advisor expenses (mileage, meals, lodging, etc.) to attend regional/State/national conferences and activities. These added cost funds cannot be used for student expenses. However, local districts may elect to pay all student expenses out of their general fund revenues.

F) Technical Assistance

The State Board of Education has approved funding for a project at Eastern Michigan University to provide the leadership for the operation of the Michigan DECA organization. Eastern Michigan University's responsibilities are to prepare and distribute materials, plan conferences, plan and conduct competitive events, communicate with chapters, provide advisor inservice, etc.

For information about DECA contact:

Mr. David Wait	OR	Mr. Charles Arensmeier
DECA Project Director		Consultant
204 B Sill Hall		Vocational-Technical
Eastern Michigan University		Education Service
Ypsilanti, MI 48197		P. O. Box 30009
(313) 487-0133		Lansing, MI 48909
		(517) 335-0361

XIII. REFERENCES

The following documents are available from the Michigan Vocational Education Resource Center, 133 Erickson Hall, Michigan State University, East Lansing, Michigan 48824. Michigan toll-free telephone number 1-800-292-1606.

- A) Legal Modules for Cooperative Education, Second Printing - May 1986.
- B) Marketing and Distributive Education, student recruitment brochure, February 1985.
- C) Marketing Education Curriculum Guide, 1986.
- D) The School Store...Making It Work, 1980.
- E) Vocational Cooperative Education Handbook, Second Printing - June 1982.

Other:

- A) Crawford, Lucy C. and Meyer, Warren G., The Organization and Administration of Distributive Education, Merrill Publishing Company, 1300 Alum Creek Drive, Columbus, OH 43216, 1972.

- B) Distributive Education Programs, monograph, U.S. Department of HEW, Office of Education, Superintendent of Documents, Government Printing Office, Washington, DC 20402, Stock #017-080-01898, June 1978.
- C) IDECC Course-of-Study Guide, IDECC: The Ohio State University, 1564 West First Avenue, Columbus, OH 43212, 1980.
- D) Lucas, Stephen R. and Miles, Benton E., The Development of Standards for Secondary Distributive Education Programs, a research study, American Vocational Association, 2020 North 14th Street, Arlington, VA 22201, 1978.
- E) Lynch, Richard L., Marketing Education: A Future Perspective, monograph, The National Center for Research in Vocational Education, The Ohio State University, 1960 Kenny Road, Columbus, OH 43210, 1983.
- F) Marketing Yourself for Success, informational brochure, Marketing Education Association, 1908 Association Drive, Reston, VA 22091, 1984.
- G) National Study of School Evaluation, 2201 Wilson Boulevard, Arlington, VA 22201, Distributive Education Section 4.4, 1978.
- H) Trapnell, Gail, Designing Programs for Marketing and Distributive Education, monograph, American Vocational Association, 2020 North 14th Street, Arlington, VA 22201, 1979.

XIV. TECHNICAL ASSISTANCE

For additional information contact: Dr. Carl A. Woloszyk, Vocational Education Consultant, Michigan Department of Education, Vocational-Technical Education Service, P. O. Box 30009, Lansing, Michigan 48909, Telephone: (517) 335-0376.

TRADE & INDUSTRIAL EDUCATION

I. DEFINITION

"Trade and Industrial Education" (T&I) means education which includes any subject necessary to develop manipulative skills, technical knowledge, and related information such as job attitudes, safety practices and trade judgment necessary for employment in a trade or industrial occupation.

Occupations to be served could be any craft, skilled trade, semi-skilled, or single skilled occupation which directly functions in the designing, producing, processing, fabricating, assembling, testing, modifying, maintaining, servicing or repairing of any product or commodity.

II. OBJECTIVES

A program of Trade & Industrial Education shall:

- A. Meet the full spectrum of needs from the single skill operatives to the highly skilled Trade & Industrial crafts.
- B. Take into consideration the varied interests and abilities of the students and the industrial or technical needs of the community. The program of instruction in all courses shall be sufficiently extensive in duration and intensive within a scheduled unit of time.
- C. Enable the student to develop necessary skills and related technical information essential for successful entry into the occupation or occupational field he/she is preparing for.

III. INSTRUCTIONAL PROGRAM/CONTENT

A) Trade & Industrial Occupations

<u>CIP Code</u>	<u>Program Description</u>
09.0701	<u>Radio/TV General.</u> An approved instructional program that describes the methods and techniques used to produce and broadcast programs on radio and television.
12.0403	<u>Cosmetology.</u> An approved instructional program that is offered in a high school, area vocational center, or, by contract with a private school. This program must be approved by the Department of Licensing and

Regulation and the Vocational-Technical Education Service, in accordance with the State Board of Cosmetology General Rules and Regulations for the administration for schools, students, cosmeticians, and cosmetological establishments in Michigan. The program prepares individuals to care for and beautify hair, complexion, and hands by giving shampoos, rinses, and scalp treatments, styling, setting, cutting, dyeing, tinting, permanent waving, and bleaching hair; and giving facials, manicures, and hand and arm massages, with emphasis on hygiene, sanitation, customer relations, and salon management. Instruction qualifies students for licensing examinations.

43.0107 Law Enforcement. An approved instructional program that describes the theories, principles, and techniques of developing, administering, and managing services for the safety and protection of people and property.

46.0301 Electrical and Power Transmission Installation. An approved instructional program that generally prepares individuals to install, operate, maintain, and repair residential, commercial, and industrial electrical systems and the power lines that transmit electricity from its source of generation to its place of consumption.

Course 01 Residential Electricity. An approved instructional program that prepares individuals to install, operate, maintain, and repair electrically-energized systems such as residential, commercial, and industrial electric-power wiring, and D.C. and A.C. motors, controls, and electrical-distribution panels. Includes instruction in the use of test equipment.

Course 02 Industrial Electricity. An approved instructional program that prepares individuals to assemble, install, operate, maintain, and repair electrical equipment used in industry and manufacturing. Includes instruction in using electrically controlled equipment in various types of industrial machinery such as power supplies, amplifiers, motors, controls, digital and computer circuitry, synchro and servomechanisms, mechanic-

power-transfer systems, hydraulic systems, and three-phase A.C., and control circuitry.

46.9999

Construction Trades. A summary of groups of instructional programs that prepares individuals to erect, install, maintain, and repair buildings, highways, airports, missile sites, and other structures using materials such as metal, wood, stone, brick, glass, concrete, and composition substances. Includes instruction in cost estimating: cutting, fastening, and fitting various materials; the use of hand and power tools; and in following technical specifications and blueprints.

Course 01 Construction -On-Site. An approved instructional program that prepares individuals in the accomplishment of the tasks for CIP Code 46.9999 where a product or service is rendered to certain private individuals or public sectors of the surrounding community. The most frequent products of this activity are residential housing units which are sold by the LEA or a third party. Included in this code are programs dealing specifically with residential house construction, modular home, or shed building where such units are sold at a set price or on a bid price system. This code also deals with renovation or add on types of construction where building supplies and/or materials are provided or donated for use in a permanent structure or product.

Course 02 Construction - In-School. An approved instructional program that prepares individuals in the accomplishment of the tasks for CIP Code 46.9999 utilizing the mock-up, build-up, tear down concept of instruction. Included in this definition would be programs specifically dealing with simulation of residential and commercial construction, in a school setting, with experience gained in wall building, common systems of framing, wiring, roofing, masonry, estimating concrete work, blueprint reading, tools of the trade and all other skills which may be acquired in a classroom or labo-

ratory setting. An in-school program is a higher cost program because the building materials are consumed on a one-time basis which necessitates the purchasing of significant materials for each section. The materials are not sold but are "utilized" in the natural course of instruction.

Course 03 Masonry. An approved instructional program that prepares individuals to lay bricks and/or blocks. Includes instruction in laying out and/or spacing bonds; determining vertical and horizontal alignment of courses using gauges, plumb bobs, and levels; and cutting, notching, and shaping blocks, bricks, terra-cotta veneer, glass, and stone to construct or repair walls, partitions, arches, sewers, and fireplaces. Included in this program is training in reading architectural plans, planning, and estimating.

Course 04 Plumbing and Pipefitting. An approved instructional program that prepares individuals to assemble, install, and maintain piping and piping systems, fixtures, fittings and drainage systems for heating, cooling, sprinkling, and industrial processing systems. Instruction is given in material selection and use of tools to cut, bend, join, and weld pipes according to specifications and plumbing codes.

47.0101 Electrical and Electronics Repair. Approved instructional programs that provide organized learning experiences related to the testing, installation, maintenance and repair of electrical and electronic equipment systems and components. These programs generally prepare individuals to operate, maintain, and repair business machines, communications equipment, major and small appliances commercial vending machines, and related equipment.

Individuals become knowledgeable of electrical principles, codes, and electronic assemblies.

Course 01 General Electronics. An approved program that prepares an individual in a

cluster of related fields, such as electronics assembly, radio and television service and repair, communication system service and repair; home entertainment systems service and repair; audio visual systems service; electric appliance service and repair; commercial vending machines and related equipment; and consumer product service and repair.

Course 02 Communication Electronics. An approved instructional program that prepares individuals to assemble, install, operate, maintain, and repair one-and two-way communications equipment and systems, including AM and FM radio, television, hearing aids, and other electronic communication devices, or systems. Includes instruction in using actual equipment or educational trainers, in various types of equipment, motors, mechanical devices, power suppliers, amplifiers, and digital circuitry; the use of testing equipment; and Federal Communications Commission (FCC) licensing requirements.

Course 03 Industrial Electronics (Robotics). An approved instructional program that prepares individuals to assemble, install, operate, maintain, and repair electrical/electronic equipment used in industry and manufacturing. Includes instruction in using actual equipment in various types of equipment such as power supplies, amplifiers, motors, controls digital and computer circuitry, synchro and servomechanisms, mechanic-power-transfer systems, pneumatic systems, hydraulic systems, and three-phase A.C., electronic wave-shaping, and control circuitry.

Course 04 Instrumentation Electronics. An approved instructional program that prepares individuals to design and develop prototypes for testing and evaluate control or measurement devices on systems and to prepare graphs, written reports, and test results in support of

the professional personnel working in the field of instrumentation. Includes instruction in the fields of electricity, electronics, mechanics, pneumatics, and hydraulics as they pertain to the principles of control, recording systems, automated devices, and the calibration of instrumentation units or systems.

Course 05 Computer Electronics. An instructional program that prepares individuals to assemble, install, operate, maintain, and repair computers and digital-control instruments. Includes instruction in power supplies, number systems, gating logic, displays, timing circuitry, memory structure, address modes, buffers and registers, microprocessor design, peripheral equipment, programming, and interfacing, including the use of testing equipment and various computer electronic application.

47.0102 Business and Vending Machine Repair. An approved instructional program that prepares individuals to maintain and repair a variety of office machines, such as typewriters, dictation machines, calculators, data processing equipment, duplicating machines, and mailing machines. This program will also prepare individuals to service, adjust, and repair coin vending machines; verify by observation that machines are functioning properly; perform tests on ice-making, refrigeration, carbonation, and evaporation systems; dispensing, electrical and coin handling systems; and identify and correct malfunctions, including replacing worn or defective electrical and/or mechanical parts using hand and power tools.

Course 01 Business Machines. An approved instructional program that prepares individuals to maintain and repair a variety of office machines, such as typewriters, dictation machines, calculators, data processing equipment, duplicating machines, and mailing machines. Includes instruction in diagnostic techniques, the use of testing equipment, and the principles of mechanics, electricity,

and electronics as they relate to the repair of business machines.

Course 02 Vending Machines. An approved instructional program that prepares individuals to install, service, adjust, and repair coin vending machines; verify by observation that machines are functioning properly; perform tests on ice-making, refrigeration, carbonation, and evaporation systems; dispensing, electrical and coin handling systems; and identify and correct malfunctions, including replacing worn or defective electrical and/or mechanical parts using hand and power tools. Includes instruction in refinishing units, transporting units to location, and connecting water or electric lines.

47.0106 Major Appliance Repair. An approved instructional program that prepares individuals to repair, install, and service major gas, electric, and microwave consumer appliances such as stoves, refrigerators, dryers, water heaters, washers, and dishwashers.

47.0201 Heating, Air Conditioning, and Refrigeration Mechanics. A group of approved instructional programs that prepare individuals to install, repair, and maintain the operating condition of heating, air conditioning, and refrigerating systems.

Course 01 Heating, Air Conditioning, and Refrigeration. An approved instructional program that generally prepares individuals to install, repair, and maintain the operating condition of heating, air conditioning, and refrigerating systems.

Course 02 Air Conditioning. An approved instructional program that prepares individuals to become proficient in the installation, repair, and maintenance of commercial, industrial and domestic air conditioning systems. Included is instruction in the theory and application of basic principles involved in conditioning of air: cooling, heating, filtering, and controlling humidity; the operating characteristics of various

units and parts; blueprint reading; the use of technical reference manuals; the diagnosis of malfunctions; the overhaul, repair, and adjustment of units and parts such as pumps, compressors, valves, springs, and connections; and the repair of Electronic and Pneumatic control systems.

Course 03 Heating. An approved instructional program that prepares individuals to install, operate, test, repair, and maintain commercial and domestic heating systems.

Course 04 Refrigeration. An approved instructional program that prepares individuals to learn shop experiences concerned with commercial chilling and freezing systems, including theory, application, and operation of compressors, expansion and float valves, thermostats, and pressure control; diagnosing, overhauling, and testing methods and procedures; charging and discharging systems with refrigerants; and testing hermetic units, relays, and overload devices.

47.0301 Industrial Equipment Maintenance and Repair. A group of approved instructional programs that prepares individuals to operate, maintain, and repair heavy-duty equipment such as bulldozers, cranes, graders, tractors, trailers, concrete mixers, crawler-mounted shovels, draglines, and compressors.

47.0401 Hydraulics and Pneumatics. An approved instructional program that prepares individuals for employment in activities that require specific knowledge of fluid lines and pressure valves in heavy equipment, industrial machinery, and mining and drilling equipment. Instruction is given in installing, maintaining, and preparing hydraulic and pneumatic systems, Pneumatic tools, and repair of various types of meters, measuring devices, and control devices such as heating and air conditioning controls; dial pressure gauges; scales and balances; electrical controlling measuring and recording devices; and optical, aeronautical, and navigational instruments. Includes instruction in diagnosing malfunctions; disassembling, repairing, and/or replacing faulty parts; and cleaning, assembling, and adjusting

instruments using special bench tools, hand tools, and other meters and standards.

- 47.0408 Watch Repair. An approved instructional program that prepares individuals to make, maintain, and repair clocks, watches, chronometers, and other types of time-measuring devices by diagnosing malfunctions, disassembling, repairing, and/or replacing straps, bands, crystals, crowns, and hands. Includes instruction in the use of various bench and hand tools such as lathes, staking tools, loupes, truing calipers, timing machines, pallet warmers, and other grinding, drilling, and polishing tools. Also instruction in the use of various materials such as metals, plastics, chemicals, oils, waxes, and abrasives.
- 47.0602 Aircraft Mechanics. An approved instructional program that prepares individuals to inspect, repair, service, and overhaul all airplane parts, including engines, propellers, instruments, airframes, fuel and oil tanks, control cables, and hydraulic units. This program is designed to meet Federal Aviation Administration requirements for licensing as an airframe power-plant mechanic.
- 47.0603 Automotive Body Repair. An approved instructional program that prepares individuals to repair body and fenders of automobiles. Includes instruction in body preparation for painting and finishing.
- 47.0604 Automotive Mechanics (Auto Specialization). An approved instructional program that prepares individuals to engage in the servicing, maintenance, adjustment, and repair of automotive components and systems. This program provides a sequence of learning experiences related to Michigan repair categories requiring certification, engine repair, engine tune-up, front end and steering systems, brakes and braking systems, automatic transmission, manual transmission, front and rear axles, electrical systems, and heating and air conditioning. This program may include automotive diesel engine repair. Learning activities in the classroom, laboratory, shop and actual work setting are combined to provide students with the opportunity to become knowledgeable of nomenclature, safety principles and practices and job entry level skills in disassembling, assembling, inspecting, repairing and replacing components or systems.

47.0605 Diesel Mechanics. An approved instructional program that prepares individuals to repair diesel engines in vehicles such as automobiles, buses, ships, trucks, railroad locomotives, and construction equipment, and to repair stationary diesel engines in electrical generators and related equipment. Includes instruction in diagnosing malfunctions; disassembling engines and replacing parts; and in repairing and adjusting fuel-injection systems, oil and water pumps, generators, governors, auxiliary and accompanying power units, controls, and transmissions, using a variety of tools and testing and diagnostic equipment.

47.0606 Small Engine and Related Equipment Repair. An approved instructional program that prepares individuals to maintain and repair small internal-combustion engines used on portable power equipment such as lawnmowers, chain saws, rotary tillers, motor-cycles, and snowmobiles.

48.0101 Drafting. An instructional program that generally prepares individuals to plan, prepare, and interpret mechanical, architectural, structural, pneumatic, marine, electric/electronic, topographical, and other sketches; to use reproduction materials, equipment, and processes to develop, plan, and process charts and drawings; to develop models; and to repair reports and data sheets for writing specifications.

Course 01 General Drafting. An approved instructional program that prepares individuals with organized specialized learning experiences which emphasize theory, use of the drafting room, and laboratory and shopwork as each relates to gathering and translating data or specifications, including the aspects of planning, preparing and interpreting mechanical, architectural, structural, pneumatic, marine, electrical/electronic, topographical, and other drawings and sketches. Instruction is designed to provide experiences in drawing; in the use of reproduction materials, equipment, and processes; the preparation of reports and data sheets for writing specifications; the development of planning and process charts and drawings; and the development of models. Instruction emphasizes the

development of skills and knowledge essential for employment in ancillary capacities such as tracers or reproduction equipment operators, and for occupations such as mechanical draftsman, structural draftsman, detailer, marine draftsman, tool designer, fixture designer, and punch and die designer.

Course 02 Architectural Drafting. An instructional program that prepares individuals to support architects and/or architectural engineers in developing plans for buildings or other structures, using a variety of building materials; in creating layouts and designs in keeping with building codes, zoning laws, ordinances, and other regulations, and in styling and planning in keeping within cost limitations and client preferences.

Course 03 Mechanical Drafting. An instructional program that prepares individuals to assist engineers in the development of detailed working drawings and related specifications for mechanical devices and machinery. Includes instruction in sketching rough layouts; drafting detailed multiview drawings; computing magnitude, direction, and point of application of tension, compression, and bending factors; compiling and analyzing text data to determine design effects on machinery in relation to temperature, pressure, speed, horsepower, and fuel consumption; and producing drawings that indicate dimensions, tolerances, fasteners, joining requirements, and other engineering data.

48.0201 Graphic and Printing Communications. A group of approved instructional programs that prepares individuals to design and execute layouts and illustrations for advertising displays and instructional manuals. Includes instruction in all phases of offset printing, layout, composition, presswork and binding, flexography, lithography, photoengraving, and other graphic arts related to the printing industry.

Course 01 Graphic Arts. An approved instructional program that generally prepares individuals in the approaches and techniques used in the various graphic and printing communications specialties.

Course 02 Commercial Art. An approved instructional program that prepares individuals to design and execute layouts and make illustrations for advertising displays and instructional manuals. Includes instruction in the preparation of copy, lettering, poster, package, and product design; fashion illustration; silk screening; air brushing; and inks and color dynamics.

Course 03 Commercial Photography. An approved instructional program that prepares individuals to use cameras and laboratory film processing techniques. Includes instruction in composition and color dynamics, contact printing, enlarging, developing film, use of air brushes, cameras, meters, and other photographic equipment, portrait, commercial, and industry photography, processing microfilm, and preparing copy for printing or other graphic arts processing.

Course 04 Lithography, Photography, and Platemaking. An approved instructional program that prepares individuals to engage in activities concerned with lithography, lithographic photography, stripping, and related platemaking processes.

48.0503

Machine Tool Operation/Machine Shop. An approved instructional program that prepares individuals to shape metal parts on machines such as lathes, grinders, drill presses, milling machines, and shapers. Programs may also train individuals in the use of one machine tool. Includes instruction in making computations related to work dimensions, testing feeds and speeds of machines using precision measuring instruments such as layout tools, micrometers, and gauges; machining and heat-treating various metals; and in laying out machine parts.

- 48.0506 Sheet Metal. An approved instructional program that prepares individuals to lay out, fabricate, erect or install and maintain items made of steel, copper, stainless steel, and aluminum using hand tools and machines such as cornice brakes, forming rolls, and squaring shears.
- 48.0508 Welding, Brazing, and Soldering. An approved instructional program that prepares individuals to use gases and/or welding processes and to braze and solder metal parts according to diagrams, blueprints, or written specifications.
- 48.0604 Plastics. An approved instructional program that prepares individuals to mold and cast plastic parts, Patterns, sample parts, and plastic products, fit, fabricate, and repair internal carvings; finish plastic parts, and assemble, plastic components into products.
- 48.0701 Woodworking and Furniture Making. An approved instructional program that generally prepares individuals to lay out and shape stock, assemble wooden articles or subassemblies, mark, bind, saw, carve, and sand wooden products, repair wooden articles, and use a variety of hand and power tools.

Course 01 Furniture Making. An approved instructional program that prepares individuals to assemble and finish wood furniture. Includes instruction in preparing free-hand sketches, fastening wooden parts with glue, reinforcing joints with dowels, screws, staples, or nails using power screwdrivers, staple guns, or hammers, and finishing and/or refinishing new, used, damaged, or worn furniture according to specifications.

Course 02 Millwork and Cabinet Building. An approved instructional program that prepares individuals to engage in the mass production of such articles as window frames, moldings, trim and panels, and such products as store fixtures, kitchen cabinets, and office equipment. Includes instruction in cutting, shaping, assembling, and refinishing articles, installing hinges, catches, drawer pulls, and other hardware, and planning and drafting layouts.

- 49.0101 Air Transportation. An approved instructional program that generally prepares individuals to engage in activities concerned with the inflight operation of commercial and private airplanes, including piloting, navigating, and providing passenger services and general ground support.

IV. SPECIAL CONDITIONS

A) Cosmetology Programs

The practice of cosmetology requires a license issued by the State of Michigan, Department of Licensing & Regulation - Board of Cosmetology.

Student training requirements are at least 1,500 hours extending over a period of at least 10 months in a school of Cosmetology approved by the Department of Licensing & Regulation Board of Cosmetology. A student who has served at least 2 years as an apprentice in a licensed cosmetological establishment in which Cosmetology is practiced will meet the training section of the licensing requirements.

B) Mechanic Certification/Mechanic Trainee Permit Fee Waiver

Effective December 13, 1980, it is the responsibility of the repair facility to insure that any person in their employ, who performs repairs on a motor vehicle, either possess proper certification or a mechanic trainee permit.

1. Repair Categories Requiring Certification

- a. The Automobile and Light Truck repair categories for vehicles under 10,000 pounds Gross Vehicle Weight are:
 1. Engine Repair
 2. Engine Tune-Up
 3. Front End & Steering Systems
 4. Brakes & Braking Systems
 5. Automatic Transmission
 6. Manual Transmission, Front & Rear Axles
 7. Electrical Systems
 8. Heating & Air Conditioning
- b. The Heavy-Duty Truck repair categories for vehicles over 10,000 pounds G.V.W. are:
 1. Engine Repair, Gasoline
 2. Engine Repair, Diesel
 3. Drive Trains
 4. Brakes & Braking Systems

5. Suspension & Steering Systems

6. Electrical Systems

c. Repair categories for other on-road vehicles are:

1. Motorcycle

2. Recreational Trailer

2. Eligibility for Mechanic Certification or Trainee Permit Fee Waiver

The Michigan Department of State is responsible for administering motor vehicle mechanic competency examinations and approving applications for mechanic certification.

3. Trainee Permit Fee Waiver

Effective August 25, 1981, Secondary Vocational Education students, employed in a major motor vehicle repair category and on Co-op, no longer are required to pay a \$20 mechanic trainee permit fee. Although the fee is no longer required, a mechanic trainee permit application must be filed. The application should be completed with the co-op training agreement attached and mailed to: Michigan Department of State, Bureau of Automotive Regulation, Lansing, Michigan 48918. Applications are available at the above address.

The mechanic trainee permit will enable the student trainee to work under the direct supervision of a specialty or master mechanic during the time of employment in one or more of the major motor vehicle repair categories. For more information, please contact: Michigan Department of State, Bureau of Automotive Regulation, Lansing, Michigan 48918. Phone: (517) 373-9460.

C) Contracts

Contracting with business and industry is an alternative method of providing Trade & Industrial vocational education. This method provides vocational education that is not normally available in a public educational institution.

Through contracted arrangements, a private school, community college, business or industrial organization can provide occupational training and instruction. Contracting focuses upon another delivery system capable of providing training for students other than what may be traditionally or economically feasible, under controlled conditions. The contracted training should be in accordance with state and local law and follow the Department of Education guidelines.

The cost of contracted programs may be charged to added cost funds on the basis of the contract cost per student hour or the average added cost factor, whichever is lower. To be eligible, all contracts must be approved in advance by the Michigan Department of Education according to prescribed annual application procedures.

1. Guidelines for Contractual Agreements

For more information regarding contracted programs, refer to Tab II, Section K of the Administrative Guide for Vocational-Technical Education in Michigan. Contact a Trade & Industrial Education Consultant, Michigan Department of Education, Vocational-Technical Education Service for needed assistance.

D) Cluster Guidelines for Trade and Industrial Programs

Guidelines for clustering Trade and Industrial programs are currently being developed. Experience indicates that the implementation of a cluster concept requires greater lead time than a single program approach. Technical assistance is available from the Vocational-Technical Education Service to initiate the development of clusters. Notification of intent to develop a cluster should be submitted to the Vocational-Technical Education Service early in the planning stages of development, regardless of the time of year or relationship to the CEPD Annual Plan process.

1) Cluster Concept (theoretical)

...a form of vocational education which prepares the individual to enter into gainful employment in a number of occupations which have sufficient commonalities in human requirements and kinds of work to permit a high degree of mobility between, as well as job entry into, the occupations associated with the cluster.

2) Cluster Concept (operational)

A competency-based vocational-technical program in which tasks, with occupational similarity in CIP Code areas/DOT Job Titles, are grouped into a common core, and where the student, after mastering the core tasks, moves into progressively more specific and/or advanced areas of instruction.

E) Paraprofessionals

In Trade & Industrial education programs, which utilize paraprofessionals, in addition to the certified teacher, the maximum 22-1 teacher-pupil ratio may be increased up to 30-1

students to one (1) certified teacher and a paraprofessional. An additional certified teacher is required for any number of students in excess of 30 up to 44 students, provided laboratory space and work stations are adequate.

V. ADVISORY COMMITTEES

All state approved vocational education programs are required to make use of an occupational or craft advisory committee composed primarily of persons from business, industry, and labor knowledgeable in that specialized occupational area. Craft advisory committees can help provide assistance in the development, promotion, operation, evaluation, and maintenance of vocational education programs. Craft advisory committees may be established to serve an occupational program or closely related cluster of programs on a building, district, multi-district, or CEPD arrangement. Local conditions will dictate the most effective and efficient structure to establish. Additional information regarding advisory committees can be found in Tab II, Section I of the Administrative Guide for Vocational-Technical Education in Michigan.

VI. TEACHER CERTIFICATION

All persons teaching a state approved vocational education program are required to be vocationally certified. The Michigan Department of Education's publication entitled, "Administrative Manual - Vocational Teacher Certification," provides detailed information concerning vocational certification requirements. This document may be obtained by writing to the Michigan Department of Education, Teacher Preparation and Certification Service, P. O. Box 30009, Lansing, Michigan 48909, telephone: (517) 373-3310. Questions pertaining to vocational certification should be directed to the above address or phone number.

VII. PROGRAM ORGANIZATION

A) Curriculum

A task based curriculum management system will be utilized in each Trade and Industrial Education program. Curriculum Guides for some trade and industrial programs are available by contacting the Michigan Vocational Education Resource Center, 133 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, telephone: Toll free in Michigan: 1-800-292-1606.

B) Articulation

Many Michigan community colleges and some four-year colleges/universities have entered into articulation agreements with Secondary institutions to assist students to meet their

employment goals. The Michigan Department of Education, Vocational-Technical Education Service, encourages articulation agreements where practical and desired.

VIII. FACILITIES AND EQUIPMENT

A) General Conditions

Adequate Trade & Industrial Education facilities and equipment should be provided to assist in achieving the program goals and course objectives. Some general guidelines are:

- 1) Readily accessible to all students to be served.
- 2) Adequate to meet the needs of the course of study and maximum class enrollment.
- 3) Designed or modified to accommodate students with physical handicaps or other educational needs.
- 4) Conducive to good learning activities and conform with all safety and environmental standards.
- 5) Up-to-date and meet industry quality and standards.

Adequate facilities should be provided for tool and equipment storage, materials and supplies, student work storage, instructional personnel needs and adult education classes if facilities are shared. Trade & Industrial Education facilities and equipment should meet all current local, state, and federal health and safety regulations. Refer to the School Plant Planning Handbook (Bulletin 412, Supplement) in Tab II, Section O, of the Administrative Guide for Vocational-Technical Education in Michigan, and curriculum guides which are available at the Michigan Vocational Education Resource Center.

B) Student Space Ratio

Student-space standards have been established to provide a quality learning environment and promote the safety of both students and instructors and provide sufficient space for handicapped students to have access to facilities. Programs require equipment and work stations which simulate business and industrial practices. Accordingly, safety zones, proper storage and teaching areas require more space than academic classrooms and frequently that of industry itself. The following list does not include needed general classroom space.

<u>CIP Code</u>	<u>Program Name</u>	<u>Per-Pupil Square Foot Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
09.0701	Radio & Television Broadcasting	80	100
12.0403	Cosmetology	80	100
43.0107	Law Enforcement Training	50	65
46.0301	Electrical & Power Transmission Installation	50	65
	Residential Electricity (Course 01)	50	65
	Industrial Electricity (Course 02)	50	65
46.9999	Construction Trades On-Site (Course 01)	*	*
	Construction Trades In-School (Course 02)	130	150
	Masonry (Course 03)	80	100
	Plumbing & Pipefitting (Course 04)	80	100
47.0101	General Electronics (Course 01)	50	65
	Communication Electronics (Course 02)	50	65

*Mobile unit minimum 600 square feet, plus square footage of project house. Mobile units to contain restroom, tool and equipment storage, and on-site classroom.

<u>CIP Code</u>	<u>Program Name</u>	Per Pupil Square Foot Range	
		<u>Minimum</u>	<u>Optimum</u>
47.0101 (Cont.)	Industrial Electronics (Robotics) (Course 03)	50	65
	Instrumentation (Course 04)	50	65
	Computer Electronics (Course 05)	50	65
47.0102	Business Machine Maintenance (Course 01)	50	50
	Vending Machine Repair (Course 02)	80	100
47.0106	Major Appliance Repair	130	150
47.0201	Heating, Air Condi- tioning, and Refrigeration	80	100
47.0301	Industrial Equipment Maintenance and Repair	180	200
47.0401	Hydraulics and Pneumatics	130	150
47.0408	Watch Repair	50	65
47.0602	Aircraft Mechanics	180	200
47.0603	Automotive Body Repair	180	200
47.0604	Automotive Mechanics (Auto Specialization)	180	200
47.0605	Diesel Mechanics	180	200
47.0606	Small Engine Repair	50	65
48.0101	Drafting (Occupations) (Course 01) General	50	65

<u>CIP Code</u>	<u>Program Name</u>	<u>Per Pupil Square Foot Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
48.0101 (Cont.)	Architectural Drafting (Course 02)	50	65
	Mechanical Drafting (Course 03)	50	65
48.0201	Graphic Arts (Occupations) (Course 01)	80	100
	Commercial Art (Occupations) (Course 02)	50	65
	Lithography, Photography and Platemaking (Course 03)	80	100
48.0503	Machine Tool Operation/Machine Shop	130	150
48.0506	Sheet Metal	80	100
48.0508	Welding, Brazing, and Soldering	130	150
48.0604	Plastics (Occupations)	130	150
48.0701	Woodworking and Furniture Making (Course 01)	130	150
	Millwork-Cabinet Making (Course 02)	130	150
49.0101	Air Transportation Aviation Occupations	180	200

C) Equipment Inventory-Maintenance

An up-to-date instructional equipment inventory should be maintained and filed in the program area and administrative office. Lists of needed equipment are available from the Michigan Vocational Education Resource Center at Michigan State University.

IX. CLASS TIME

Trade & Industrial Education programs will be a minimum of two consecutive class periods (block-time) 110 minutes per day or 550 minutes per week, for a full school year (36-40 weeks).

X. COOPERATIVE EDUCATION

Cooperative education is a method of instruction that combines work-related learning experiences available in the community with vocational instruction provided in an educational institution.

The essential elements of cooperative education programs include:

- A) Alternate or parallel periods of instruction in school and supervised public or private employment.
- B) A written training agreement among the school, an employer, and a student.
- C) Vocational instruction (including required academic instruction) related to the job and the student's academic study or career goals.
- D) Carefully planned alternation of study and work supervised to further the student's education and employability, and
- E) The student's employment and compensation in compliance with federal, state, and local laws.

See Tab II, Section J of the Administrative Guide for Vocational-Technical Education in Michigan for additional information.

XI. VOCATIONAL STUDENT ORGANIZATION

A vocational student organization is an integral part of a high quality trade and industrial education program. All programs are encouraged to operate Vocational Industrial Clubs of America (VICA) chapters as an intracurricular component.

A) The purposes of VICA are as follow:

- 1. To encourage the development of occupational skills, knowledges, and abilities to a high level of proficiency.
- 2. To develop leadership ability through participation in educational, vocational, civic, recreational, and social activities.
- 3. To develop character and to prepare members for useful citizenship and foster patriotism.

4. To motivate students and vitalize the instructional program.
5. To develop and strengthen the confidence of young people in themselves and their work.
6. To unite in a common bond without regard to race, creed, or national origin, students with similar career objectives.
7. To assist students in refining their career objectives through realistic training.
8. To develop a sense of social acceptability and individual responsibility toward the home and community.
9. To encourage scholastic improvement and school loyalty.
10. To foster a deep respect for the dignity of all work.

B) There are many benefits to the students, teachers, schools and communities who participate in the student organizations.

1. Benefits to Students:

- a) Provides incentives to improve personal and occupational skills.
- b) Provides career awareness and exploration activities.
- c) Provides leadership development opportunities.
- d) Provides activities to develop civic understanding and responsibility.
- e) Provides an opportunity to meet with trade and industry leaders and students with similar backgrounds and career interests.

2. Benefits to Teachers:

- a) Motivates students.
- b) Publicizes the vocational program.
- c) Provides opportunities to meet and work with vocational teachers in the same occupational area.
- d) Provides an established recognition program with awards for student achievement.

- e) Provides opportunities to meet and work with leaders in trade, industry, and education.

3. Benefits to School/Community:

- a) Publicizes the school and community.
- b) Creates school spirit.
- c) Develops pride in the school and community.
- d) Provides students with leadership skills for future leadership positions.
- e) Involves students in community service activities.
- f) Students are better trained to enter work force.

C) Experiences and Opportunities for VICA Members

VICA members learn to be both leaders and followers. They learn how to plan activities, carry out activities, to participate in cooperative experiences, to preside at meetings, to serve as chairpersons for committees, to manage finances, to get group consensus for decision making, and most importantly, to acquire the realization of compromise for the good of the majority -- a trait often needed on the job.

Being successful in a vocation often takes more than occupational skills. It also takes social understanding of human relations. Human relations is difficult to teach in the classroom. Students need experiences in social settings to acquire the social intelligence needed to succeed in their jobs. Through VICA conferences, workshops, and skill olympics, students increase a sense of belonging, increase ability to adjust and increase the positive personality traits.

VICA provides involvement and experiences with the community. Students can help to improve their community, learn to acknowledge the rights of others and develop useful citizenship habits by their involvement in community activities.

Through the awards and skill olympics program, students receive motivation and recognition for their accomplishments. Skill olympics are conducted at the local, regional, state, and national levels and are directly related to the vocational education programs in which the students are enrolled. Skill olympics are hands-on experiences with evaluation and judging done by individuals employed in the trade and industrial area.

D) Operational Structure for VICA

The local chapter is the foundation for the organization. Chapters are organized in the local high school or area vocational center based on the school's trade and industrial education program. The trade and industrial education teacher serves as the advisor for the local chapter. Local chapters elect student officers: President, Vice President, Secretary, Treasurer, Reporter, and Parliamentarian to lead the local chapter.

VICA also has a regional structure within the State which provides geographical boundaries for leadership meetings and competitions. These five regions make up the State association which serves as the organization that coordinates, communicates, and plans activities. At the State level, students are also elected to office (President, Secretary, Treasurer, Reporter, Parliamentarian, and five Regional Vice Presidents) each year and their function is to plan and lead regional and State activities.

On the National level, Michigan VICA is affiliated with National VICA. National VICA provides materials for the various state organizations and plans and conducts a national skill olympics conference for VICA members and advisors.

VICA has two advisory committees that provide direction for the State organization. The State advisory committee (one teacher/advisor from each region) advises on the overall operation of the organization while the State Advisory Board, comprised of individuals from industry and education, provides financial, educational, and operational support to many activities.

E) Finances

In order for students and advisors to be considered members of VICA they must pay annual membership dues. Generally, there are dues at the local, state, and national levels. The amount of the local dues is set at the local level while the State dues (\$2.50) and national dues (\$4.00) are set by the respective levels. Payment of dues can be the responsibility of each student or they can be paid by the local chapter through fund raising, school contributions, or support from business and industry.

Costs to attend regional, State, and national conferences and activities are the responsibility of the local chapter. These costs are generally paid from revenue earned through fund raising activities. There are many fund raising activities that can relate to the vocational program and, therefore, serve as a fund raiser as well as an educational activity.

Vocational education State aid added cost funds can be used to pay for teacher/advisor expenses (mileage, meals, lodging, etc.) to attend regional/State/national conferences and activities. These added cost funds cannot be used for student expenses. However, local districts may elect to pay all student expenses out of their general fund revenues.

F. Technical Assistance

The State Board of Education has approved funding for a project at Ferris State College to provide the leadership for the operation of the Michigan VICA organization. Ferris State College's responsibilities are to prepare and distribute materials, plan conferences, plan and conduct competitive events, communicate with chapters, provide advisor inservice, etc.

For information about VICA contact:

Mr. Dan Cleveland
VICA Project Director
Education 200
Ferris State College
Big Rapids, MI 49307

(616) 796-0461 ext. 5622

OR Mr. Charles Arensmeier
Consultant
Vocational-Technical
Education Service
P. O. Box 30009
Lansing, MI 48909

(517) 335-0361

XII. REFERENCES

- A) The Michigan Department of Education Vocational-Technical Education Service recommends that local education agencies have a written Safety and Health Program with extensive guidelines as a part of the vocational program curriculum.

For specific information related to safety contact:

(1) Michigan Department of Labor
Safety Education and Training Division
Secondary Complex
7150 Harris Drive, P.O. Box 30015
Lansing, Michigan 48909
(517) 322-1809

(2) Michigan Department of Education
Vocational-Technical Education Service
P.O. Box 30009
Lansing, Michigan 48909
(517) 373-3365

B) Curriculum Guides

The following Curriculum Guides are available by contacting the Michigan Vocational Education Resource Center, 133 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034, telephone: Toll free in Michigan: 1-800-292-1606.

1. Automotive Body Repair
2. Auto Mechanics
3. Commercial Art
4. Commercial Photography
5. Communication Electronics
6. Construction Trades-Carpentry
7. Construction Trades-Electricity
8. Construction Trades-Masonry
9. Construction Trades-Plumbing
10. Construction Trades-Related Areas
11. Cosmetology
12. Drafting/Architectural
13. Drafting/Mechanical
14. Graphic Arts
15. Heating, Air Conditioning, and Refrigeration
16. Industrial Electronics
17. Machine Trades
18. Small Engine and Related Equipment Repair
19. Welding

C. Leadership Handbook for the Vocational Industrial Clubs of America, Inc. (VICA); June, 1970.

XIII. TECHNICAL ASSISTANCE

Dr. Jack P. Smith
Department of Education
Vocational-Technical
Education Service
P.O. Box 30009
Lansing, Michigan 48909
(517) 373-6336

Mr. Melvin J. France
Department of Education
Vocational-Technical
Education Service
P.O. Box 30009
Lansing, Michigan 48909
(517) 335-0359

LOCAL VOCATIONAL ADVISORY COMMITTEES

I. INTRODUCTION

A local vocational advisory committee is established to provide and maintain a continuous linkage between an education agency and the community it serves. The use of a vocational advisory committee is based on the assumption that an effective vocational program cannot succeed in isolation from the community it serves. It should exist to help the education agency provide experiences which will be of value to the student upon entry into society and the world of work.

A) Definition

A vocational advisory committee is a group of individuals selected by vocational and other school personnel to provide collective advice regarding vocational education efforts within the educational service area. Members are predominantly from outside the field of education and are selected because of specialized knowledge and interest.

B) Duties

The particular direction taken by a vocational advisory committee may vary considerably. The typical vocational advisory committee is called upon to resolve issues concerning any and all facets of a program. Some of the major purposes for vocational advisory committees include:

1. Advise on developing local policy and philosophy.
2. Help to determine educational goals and objectives.
3. Help to establish and maintain good communication.
4. Guide reviews of the educational program.
5. Advise the school administration.
6. Aid in establishing student selection criteria.
7. Assist in long-range planning.
8. Provide public relations assistance.

II. MAJOR TYPES OF VOCATIONAL ADVISORY COMMITTEES

There are two major types of advisory committees commonly associated with vocational education programs at the local level. These are (1) the general vocational education advisory committee, which is

used for the total vocational program, and (2) the specialized vocational advisory committee, which is used to guide an individual vocational program. Specialized committees are often referred to as craft or occupational committees. Committees can be established to serve one education agency or may be structured to serve programs in more than one agency, the entire Career Education Planning District (CEPD), and community college. Shared use of committees provides the opportunity for coordinated delivery system planning and program articulation.

A) General Vocational Advisory Committee

This committee is a group of individuals selected from the community to provide advice regarding the overall vocational education program. It should be a formally organized committee appointed by proper authority for a defined term. The committee is usually made up of leading members of the industrial, business, agricultural, professional, labor, and educational organizations of the community. The general vocational advisory committee has no legislative or administrative authority and is to serve only in an advisory capacity. Some of its major functions include the following:

1. To serve as a means of communication between the school and community groups.
2. To suggest relevant and technical information.
3. To suggest ways for improving the dissemination of program information to the community.
4. To assist in keeping vocational program planners and counselors informed of changes in the labor market.
5. To assist the school in understanding the occupational education needs of the community.
6. To assist in reviewing the occupational curriculum and the assessment of its impact on the community.
7. To speak on behalf of the "consumers" of occupational education.
8. To advise on the development of long-range and annual plans for vocational education.
9. To suggest development of new vocational programs.
10. To assess the adequacy of and recommend physical facilities and equipment necessary for the program.

11. To assist in providing current occupational information for student counseling services.
12. To help in determining local job opportunities.
13. To assist in development of program standards for initial employment of program completers.
14. To aid in obtaining instructional resources.
15. To assist in developing cooperative relationships with JTPA and other existing employment training programs.

B) The Specialized Vocational Advisory Committee

The specialized vocational advisory committee is a group of individuals selected from the community to provide advice regarding instructional programs in specific trades, occupations, or clusters of occupations. While sometimes called occupational advisory committees, craft advisory committees, or joint apprenticeship committees, every vocational program should be served by an occupationally specific advisory committee having sufficient expertise in that occupational area. For example, specialized advisory committees could exist for horticulture, marketing education, health education, business data processing or business/office education, and others. The specialization of the committee should be directed by the program scope and tasks to be taught.

The specialized vocational advisory committee should be a formally organized committee appointed by proper authority for a defined term. The committee is usually made up of leading members in the community who have a special interest, knowledge, or competency in the program area and represent agriculture, industrial, or business, and professional and labor organizations. It has no legislative or administrative authority; its basic policy is to serve in an advisory capacity. Some of its major functions are:

1. To speak on behalf of the employers, employees, and graduates.
2. To advise on the specific skills, knowledge, and attitudes needed by students.
3. To recommend physical facilities and equipment needed for a specific occupational program.
4. To make suggestions which will promote and assure high quality programs.

5. To recommend standards of competency and achievement which are necessary for entry into employment and promotion within an occupational area.
6. To recommend competent personnel with appropriate occupational experience as potential instructors.
7. To review the instructional program and student achievement.
8. To assist in recruiting potential students, providing internships, and locating jobs for qualified graduates.
9. To assist in long-term program planning.
10. To assist in placement and follow-up efforts.

III. OPERATION

A local vocational advisory committee does not automatically guarantee a successful program nor will it follow that the committee will function without problems. School and community representatives who are realistically prepared and aware of what such a lay group can contribute will use their experiences to build and maintain good, sound programs.

- A) Policies and Procedures. A set of policies and procedures should be developed locally. Policies should include only those provisions necessary and relevant to local needs and to operational efficiency.
- B) Officers. The officers should be elected by the committee from the membership. A chairperson and secretary are the two essential officers but others may be elected. These people will be assuming additional responsibilities and will need to be able to devote extra time to committee work.

It is recommended that a teacher or administrator not serve as chairperson but might well serve as secretary. The chairperson should:

1. Call and preside at all committee meetings.
2. Schedule all meetings and make necessary committee assignments.
3. Provide leadership and facilitate major projects undertaken by the committee.

The secretary:

1. Will record, maintain, and distribute to each member of the committee minutes of every meeting.
 2. Be responsible for notifying members of the meeting date, time, and place.
 3. Provide all members with an agenda and issues to come before the committee prior to the meeting, preferably one week in advance.
- C) Meetings. The number of meetings should be determined locally. It is recommended that there be at least four (4) meetings per year with additional meetings scheduled as necessary. Local education administrators should realize that although education is their entire job, such is not the case for members of the committee. It is recommended further that:
1. The initial meeting should be held within thirty days following organization of the committee.
 2. The committee should be familiarized with all facets of vocational education and their advice and assistance solicited and used.
 3. Committee members should become acquainted with the purposes and duties of the committee.
 4. Advisory committee meetings should be planned for specific purposes such as scheduled advisory committee reviews.
 5. Scheduling of meetings should be determined by the membership based on existing problems and important matters requiring attention.
- D) Agenda. An agenda should be prepared by the officers and school representatives and sent to the membership prior to the meeting.
- E) Minutes. Minutes should be kept by the secretary and distributed to the membership. The minutes should also be made available to the school administration and local board of education.
- F) Activities. The committee may wish to divide its membership into subcommittees to do the ground work and make recommendations to the total membership. The need and function of such subcommittees would vary with the activities undertaken.

- G) Report. The committee should submit a brief annual report to the school administration and board of education. The report should provide an overview of the committee's activities and include recommendations regarding the vocational education program.

IV. COMMITTEE MEMBERSHIP

The size of the advisory committee should be determined locally. Consideration should be given to functions and size of the program and community.

Some method of revising membership should be devised at the time the committee is organized. Fresh viewpoints and ideas are essential in a changing occupational climate. On the other hand, there are advantages in continuity; thus members who have made exceptional contributions to the committee should be eligible for re-appointment. Responsibility for deciding upon an effective plan of rotation, balancing the advantages of new ideas and committee continuity, should be assumed by school personnel. Policy should be determined in regard to the number of consecutive terms that may be served by committee members. Membership terms are often staggered to allow for new members while retaining experienced representatives to maintain continuity.

V. COMMITTEE MEMBER RESPONSIBILITIES

Once committee members have been selected, there are some rights and responsibilities that they should anticipate from the appointing agency. Some of these include:

- A) To have a letter signed by an education agency administrator requesting members to serve.
- B) To know exactly what is expected of each committee member in the way of advice, assistance, cooperation, money, time, etc.
- C) To be provided initially and on a continuing basis, with information concerning vocational education developments.
- D) To be invited to attend local and state meetings concerning vocational education.
- E) To receive special invitations to attend educational functions pertaining to vocational education.
- F) To be kept informed of special studies affecting the vocational education program of the educational system.
- G) To conduct periodic occupational program reviews to assess the level of program success.

VI. ACTION ON COMMITTEE RECOMMENDATIONS

Committee members will form an opinion of their value to the local education agency by assessing the action taken on their recommendations. A committee will continue to actively participate only if its suggestions receive sincere consideration and action from instructors and administrators. If the committee's advice and suggestions are sound and reasonable, appropriate action should be taken as soon as possible with credit given to the committee. If the proposals or suggestions are not adopted, the committee should be given reasons.

VII. SHOWING APPRECIATION

Local education agencies should always give recognition to members of an advisory committee for the valuable assistance rendered. Their names should appear in school or college publications, catalogs, brochures, and releases to newspapers. Some education agencies honor advisory committees with breakfasts, luncheons, or banquets. One of the most effective ways to indicate appreciation is by having the chief administrator attend some committee meetings. In appropriate ways, she/he should show familiarity with the activities and accomplishments of the committee.

VIII. RESOURCES

For technical assistance in organizing and operating advisory committees, contact:

State Advisory Council for Vocational Education
Michigan Department of Education
P. O. Box 30008
Lansing, MI 48909
(517) 373-6407

or

Vocational-Technical Education Service
Program Development & Operation Unit
Michigan Department of Education
P. O. Box 30009
Lansing, MI 48909
(517) 373-3365

VOCATIONAL COOPERATIVE EDUCATION

I. DEFINITION

The term "cooperative education" means a method of instruction of vocational education. Students are employed through written cooperative arrangements between the school and employers and receive instruction, including required academic courses and related vocational instruction. The cooperative education method of instruction includes an alternation of school training with a job in any occupational field. These two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and to his or her employability. Work periods and school attendance may be on alternate half days, full days, weeks, or other period of time in fulfilling the cooperative program. (Carl D. Perkins Act - P.L. 98-524)

II. PROGRAM ORGANIZATION

The local school district must meet all the Federal requirements of P.L. 98-524 and the State of Michigan Statutes and General School Laws listed below:

A) Student enrollment in a vocational education program.

Students participating in vocational cooperative education must be enrolled in a vocational education program. A vocational program is a laboratory, simulation or instructional program based upon individually designed learning experiences in a vocational subject preparing the student for competencies required in a recognized occupation. Vocational programs are coded in accordance with the most recent vocational education listing of programs by the United States Department of Education, Classification of Instructional Programs (CIP).

B) Signed written agreement between the school and the employers.

The Youth Employment Standards Act (P.A. 90 of 1978) governs the legal employment of minors in Michigan. In Section 18 of the Act, a provision is made to allow a written agreement, or contract, to be entered into between an employer and the board of education of the school district, in which the minor is enrolled. This written agreement exempts a student from obtaining a work permit and allows the student to be legally employed in Michigan. The employment, however, shall not be in violation of a Federal Statute or regulation and a signed copy of the agreement shall be on file in the place of employment before a minor begins employment. The training agreement, in cooperative

education, is the legal written agreement developed cooperatively between the employer, teacher-coordinator, student, and parent and outlines the responsibilities of the employer and student to the program and establishes the legal conditions of the student-learner's employment.

- C) Related vocational instruction (including required academic instruction) in school related to the job in any occupational area.

The vocational program should be of sufficient duration to develop competencies necessary to prepare the learner for employment. The vocational program provides for coordinated instruction which combines supervised part-time employment and classroom instruction related to the learner's job. Related vocational instruction for cooperative education enrollees shall be scheduled weekly.

- D) Alternation of study and work which are planned and supervised by the school and employer. Coordination and supervision services are designed to further the student's education and employability.

The student-learner shall be employed for an average of not less than 15 hours per week during the effective time of the individual's program. The school shall have the responsibility of providing coordination and supervision services during such time.

- E) Students are employed and compensated in conformity with federal, state, and local laws.

The vocational cooperative education program provides cooperative on-the-job training that (1) employs and compensates student-learners in conformity with Federal, State, and local laws and regulations and in a manner not resulting in exploitation of the student-learner for private gain, and (2) is conducted in accordance with written training agreements between local education agencies and employers.

III. REFERENCES

Individuals requiring information pertaining to cooperative education principles, practices, State and Federal laws, rules, and regulations are asked to obtain the following references from the Michigan Vocational Education Resource Center, 133 Erickson Hall, Michigan State University, East Lansing, MI 48824:

- A) Vocational Cooperative Education Handbook, Michigan Department of Education, Vocational-Technical Education Service, Lansing, MI, Second printing, June 1982.
- B) Legal Modules for Cooperative Education, Michigan Department of Education, Vocational-Technical Education Service, Lansing, MI, Third printing, May 1986.
- C) Presenting Cooperative Education, National Child Labor Committee, New York, New York, 1983.
- D) Michigan and Cooperative Education, The Michigan Council for Cooperative Education, 1700 West Third Avenue, Flint, MI, 48502-2276.

Individuals requiring additional resources concerning cooperative education can contact the National Child Labor Committee, 1501 Broadway, Room 1111, New York, New York 10036, for the following publications:

- A) Cooperative Education Programs for Students with Special Needs, 1984, Meets the expressed needs of state, district, and local officials and teacher/coordinators for information and techniques to design and implement successful cooperative education programs for students with special needs.
- B) Hip Pocket Manual for Supervisors of Young Workers, 1984, Provides instructions, in simple language, for supervisors of young workers. Also may be used as a checklist and memory aid for experienced supervisors.
- C) Keys to Cooperative Education Programs: Volumes I and II, 1984, Volume II updated periodically. A comprehensive guide intended for use by persons responsible for cooperative education at state and local levels. Volume I contains the definitions of key elements, suggestions on how to use these elements, special problems, techniques for modifying them, and the appendices. Volume II contains detailed descriptions of the most important elements. It is prepared in loose leaf form so that additional elements may be added.
- D) Managing Cooperative Education, 1984, Presents concepts, tools, and techniques useful in the management of cooperative education programs at the state, school district and school levels.

- E) Modules for Supervisors of Young Workers, 1984,

Who's There

Interviewing Techniques for Small Businesses

Starting Up

A Guide to Breaking in the New Worker

Do You Hear What I Hear?

Communicating with Young Workers

Moving Along

Developing Competent Workers

Untying the Knots

An Approach to Solving Work Problems

Why Not Me?

Women in Non-Traditional Jobs

- F) New Generation, A quarterly newsletter dealing with issues of youth employment, migrant education, and child labor.
- G) Presenting Cooperative Education, 1984, Designed to assist teacher/coordinators to present the benefits of cooperative education to employers to obtain appropriate work stations for students.
- H) Self Assessment Guidelines for Administrators of High School Cooperative Work Experience Programs, 1984, Designed to provide administrators with information on which to base recommendations and plans to improve the effectiveness of cooperative work experience programs.
- I) The Fantastic Being, 1981, A job-hunting guide for teenagers in comic book form.
- J) Time for Transition: Teenage Parents and Employment, 1985, Explorers issues involved in helping young parents achieve economic independence.

CLASS AND LESS-THAN-CLASS-SIZE CONTRACTS
WITH BUSINESS, INDUSTRY, AND PRIVATE SCHOOLS

I. DEFINITION

Contracting with business, industry, and private schools is an alternative method of providing vocational education not normally available or feasible in a public education institution. Through contractual arrangements, private schools, business, or industrial organizations may be able to provide occupational instruction substantially equivalent to that offered in a public institution at a lesser cost, or provide programs, equipment, and services not readily available in public agencies or institutions.

II. HOW A CONTRACTED ARRANGEMENT WORKS

Student-learners enrolled in a contracted program with a private school business and/or industry will be actively engaged in the completion of tasks and educational activities on the premises of the contractor.

Instruction will be given by skilled certified personnel under the jurisdiction of the contractor. The educational activities will be in conjunction with the predetermined goals, objectives, tasks, and curriculum developed by the participating education agency, contractor, and Vocational-Technical Education Service.

The student will spend an average of two or more consecutive class periods per day with the contractor. The total time requirement shall equal or exceed that specified for inschool programs in the same CIP code. The remainder of the student's school day will be spent in activities necessary to satisfy the student's general education requirements in the home school facilities. The instructional personnel used by the contractor will meet the minimum teacher certification requirements for vocational instructors and hold valid vocational certification, including State and/or federal license, if required.

III. CONTRACTUAL ARRANGEMENTS

Local school districts and intermediate school districts, designated as operating agencies, will be considered eligible to enter into contractual agreements for the purpose of offering vocational education programs. Arrangements may be made for the provision of any portion of the instructional program, on an individual or group basis through a written contract. Such contracts shall be entered

into only upon a determination by the Michigan Department of Education that satisfactory assurance to the following has been given:

- A) That the contract is in accordance with State and local law.
- B) That the instruction to be provided under contract will be conducted as a part of a Vocational-Technical Education Service (V-TES) approved vocational education program.
- C) That the Michigan Department of Education's guidelines for contracting with business, industry, and/or private schools have been followed.

IV. PROGRAM PLANNING PROCEDURES

Local education agencies wishing to contract with a private school, business, or industrial firm should:

- A) Determine student interest in the program area and the employment opportunities available upon completion of the program.
- B) Determine program CIP (Classification of Instructional Program) code(s) and job title(s) for which students will be trained.
- C) Conduct an on-site review of the training facility, tools, equipment, and safety provisions.
- D) Contact the Career Education Planning District (CEPD) or V-TES to communicate intent and to seek assistance.
- E) Appoint an advisory committee, if one does not exist, of interested administrators, vocational teachers, representatives of business and industry, students, and parents to determine program need and the feasibility of contracting.
- F) Determine the cost of the program. If feasible to contract, draw up a contractual agreement according to the guidelines described in Section VI.

V. CONDITIONS FOR CONTRACT APPLICATION APPROVAL/FUNDING

- A) Contracts for instructional services by a private school, business, or industrial firm will be examined by V-TES for:
 - 1. Reasonable use of public funds.
 - 2. Duplication of effort by other districts within the CEPD.

3. Pending litigation against the proposed contractor. NOTE: If litigation is pending, the contract will not be approved by V-TES.
4. Inclusion of minimum provisions listed in Section VI for developing contractual agreements.
5. Class size contracted programs following application procedures established for all new programs. See Section IX for less-than-class size application procedures and timelines.

B) Funding of Contracted Programs

Refer to funding procedures in Tab V Section 7 in this guide for information pertaining to the funding of contracted programs.

VI. GUIDELINES FOR DEVELOPING CONTRACTUAL AGREEMENTS WITH BUSINESS AND INDUSTRY

The following guidelines have been developed to assist local education agencies in negotiating contractual agreements with business and industrial firms to better serve students. All arrangements shall be in writing and in sufficient detail to describe completely the legal obligation of both parties. The contract or agreement shall include, but not be limited to, the following minimum provisions:

- A) The LEA (Local Education Agency), CEPD, school name, district code number, school address, telephone number, and contact person.
- B) The contractor, name, address, telephone number, and contact person.
- C) The contract beginning date and the contract ending date.
- D) Total cost of contract per student.
- E) Total hours and weeks of instruction.
- F) The minimum number of hours for which training will be provided.
- G) The specific occupational program by name and CIP code number.
- H) Statement of goals, tasks, and curriculum for the contracted instruction.
- I) Number of students being served in the program.

- J) Identification of a local school contact person responsible for students enrolled in contracted programs.
- K) Provisions for reviewing the administration and operation of the contract by the public agency.
- L) Statement of assurance that instructional personnel hold valid vocational certification, including State and/or federal licence if required. (See "Administrative Manual - Vocational Teacher Certification" obtained by writing to the Michigan Department of Education Teacher Preparation and Certification Service, P. O. Box 30008, Lansing, Michigan 48909, telephone (517) 373-3310.
- M) Statement indicating that the business or industrial firm will not receive special consideration for the forgiveness of their taxable obligations by procuring arrangements with tax exempt school districts.
- N) Compliance by both parties with the Child Labor Provisions of the Fair Labor Standards Act as stated in the "Child Labor Requirements in Non-Agriculture Occupations" (Bulletin 101) WH Publication 1330, September 1985, or "Child Labor Requirements in Agriculture" under the Fair Labor Standards Act (Bulletin 102) WH Publication 1295, December 1984. Copies are available upon request from the U. S. Department of Labor, ESA Wage Hour Division, 647 U. S. Court House, Federal Building, 231 West Lafayette, Detroit, Michigan 48226, telephone (313) 226-7448.
- O) Specific statements regarding liability of school district, student, and the business or industrial firm in the event of accidental or willful damage to equipment and machinery, and injury to the student or others while on the premises of the contractor. Local attorneys may wish to include other protective features under unique conditions or circumstances.
NOTE: Please refer to the six conditions which determine the employee under the wage and hour act listed under Employee Relations in Section VII.
- P) Provisions for periodic assessment of each student's progress.
- Q) Provisions for defining the financial obligation of all parties in the event the instructional program is interrupted for any reason.
- R) Provisions for filling any student vacancies that may occur before the training program is completed.
- S) Statements indicating that any additional costs required of the student for tuition, fees, supplies, or materials shall be the responsibility of the contractor.

- T) When licensing is required for an occupation, provisions assuring that the student will receive training which will allow him/her to meet minimum requirements for obtaining a license and have a reasonable expectation of successfully passing the examination when required.
- U) Statement that students will not be misused by being excessively involved in production activities. Violations will result in termination of the contract.
- V) Signatures by appropriate persons.
- W) Statement indicating that final and annual approval of the contract rests with the Michigan Department of Education, V-TES.

VII. EMPLOYEE RELATIONS

To assure that students continue their status as students (trainees) when participating in a contracted program, the following criteria from the Fair Labor Standards Act should be applied to the design of the program:

- A) The training, even though it includes actual operation of the facilities of the business/industry agency or private school, is similar to that which would be given in a vocational school.
- B) The training is for the benefit of the trainees or students.
- C) The trainees or students do not displace regular employees, but work under their close observation.
- D) The agency that provides the training derives no immediate advantage from the activities of the trainees or students, and on occasion, operations may actually be impeded.
- E) The trainees or students are not necessarily entitled to a job at the conclusion of the training period.
- F) The agency and the trainees or students understand that the trainees or students are not entitled to wages for the time spent in training.

The aforementioned items are taken from United States Department of Labor publications referred to in Section VI.

VIII. LESS-THAN-CLASS-SIZE CONTRACTED PROGRAM GUIDELINES

Definition: Less-than-class-size contracted instruction is designed primarily for the delivery of programs not already available through existing vocational programs by using the local business community for instructional sites. New or unique occupations may more readily lend themselves to less-than-class-size contracting. Education agencies may find less-than-class-size contracts to be an effective way to expand educational options for students when class-size programs are not feasible due to low student interest or occupational demand. A less-than-class-size contracted program should have a maximum of five students in any one CIP code program.

Education agencies that want to operate a less-than-class-size contract for a specific vocational education program as an alternative method of providing instruction may follow the regular contracted program guidelines for contract development described in Section VI.

Positive answers to the following questions will assist in determining if the program is approvable as a less-than-class-size secondary vocational education program.

	<u>Yes</u>	<u>No</u>
A) Has a job title(s) been identified?	_____	_____
B) Does the job description for the position the student is training for usually/normally require less than a baccalaureate degree?	_____	_____
C) Has a CIP code number been identified for the proposed program?	_____	_____
D) Has a task list been identified or developed that identifies those tasks the student will learn upon program completion?	_____	_____
E) Has evidence/rationale been gathered to justify using a business place rather than a school facility to provide the training?	_____	_____
F) Have the procedures listed in these guidelines for developing contractual agreements with business and industry been followed?	_____	_____

IX. LESS-THAN-CLASS-SIZE CONTRACTED PROGRAM APPLICATION PROCEDURES AND TIMELINES

To shorten the processing/time needed for less-than-class-size contracts, the following items will apply to such programs:

- A) Before July 1, LEA's will submit a letter of intent to V-TES giving the:
 - * fiscal agent name
 - * proposed CIP codes/programs to be offered
 - * estimated enrollment per program
- B) V-TES approval to proceed will be forwarded in August.
- C) On the VE-4483 (fall enrollment report) the LEA will report:
 - * specific CIP code and program
 - * name of contractor in "course name" column
 - * beginning month and section numbers
 - * number of weeks of instruction
 - * all other 4th Friday data requested on form
- D) LEA will submit a signed copy of the contract(s) to V-TES with the VE-4483A form.
- E) LEA will submit to V-TES with the contract, attached to the VE-4483A, the application(s) for annual authorization appropriate for the proposed instructor at the instructional site(s) if the instructor lacks vocational certification.
- F) V-TES will assign a PSN (Program Serial Number).
- G) V-TES will notify the LEA of approval of the program, contract, and annual authorization of the instructor following submission.
- H) Under the present system of high employment demand ranking, it is most likely that these programs will need to be funded under the "CEPD Option" to be assured of added cost funding support.
- I) Less-than-class-size contracting will be designated with the numerical sequence beginning with "51,52,.. ." for each of the various sites designated with a given CIP code. These numbers represent courses (each site is a course).

- J) There will be one VE-4033 "LEA Vocational-Technical Education Fund Expenditures" (expenditure report) utilized for all less-than-class-size contracts. All less-than-class-size contract costs should be aggregated and reported as one program on the VE-4033.
- K) Programs in 08.XXXX (Marketing Education occupations) and 07.XXXX (Business Education occupations) will not be approved due to teacher certification standards.

AREA PROGRAM DEVELOPMENT

I. OVERVIEW

The area program concept impacts both secondary and post-secondary vocational and technical education. At the secondary level, the concept emphasizes cooperative arrangements between two or more school districts, usually adjacent, or between high schools within large districts or secondary programs offered by community colleges, for the purpose of operating jointly-shared vocational education programs.

The area concept includes, also, post-secondary vocational and technical programs on an area basis through strategically located community colleges.

Secondary area vocational education programs are designed to complement and enhance comprehensive high school programs and to articulate smoothly with post-secondary vocational-technical programs without needless duplication of programs, facilities, or staff.

II. DESIGNATION PROCEDURES

To establish secondary area vocational education programs, it is necessary to secure designation of the geographical area to be served from the State Board of Education. Application for approval of such designation, using Form VE-4009, must be submitted to the Vocational-Technical Education Service 120 days prior to any proposed area vocational millage election for those areas not previously designated.

Areas desiring to re-activate their service area designation following an unsuccessful election or establish an area vocational consortium should submit a VE-4009 application ninety (90) days prior to the desired designation date.

This is needed by the Vocational-Technical Education Service to review the applications, and obtain State Board approval. During this time, applicants to be designated will be asked to attend a joint application review meeting.

Educational agencies interested in area program development should contact Robert Pangman, Supervisor, Program Development & Operation Unit, Vocational-Technical Education Service, P. O. Box 30009, Lansing, Michigan 48909, for planning assistance.

JOINTLY PLANNED SHARED-TIME PROGRAM GUIDELINES

I. DEFINITION

Jointly Planned Shared-Time Program - An occupational program that is planned jointly by all interested K-12 districts within a CEPD and designed to assure an equitable opportunity for participation in the program by each interested K-12 district. Shared-time programs also include programs planned jointly between high schools within multi-high school districts. Shared-time programs are approved annually.

II. OBJECTIVES

- A) To encourage shared-time programs which can serve as an interim step to the establishment of a comprehensive secondary area vocational education center(s) in the CEPD.
- B) To maximize the use of existing facilities in the CEPD which can be used for housing occupational education programs.

III. GUIDELINES FOR SHARED-TIME PROGRAM APPROVAL

- A) To be eligible for approval as a shared-time program, the course must be approved for reimbursement by the Michigan Department of Education.
- B) Districts will be expected to arrange for transportation for all students. This guideline is intended to assure a district's students' equitable access to shared-time programs.
- C) All K-12 districts in the CEPD should be apprised by the CEPD Vocational-Technical Specialist of efforts to develop any shared-time program in the CEPD. Those districts not interested should indicate in writing to the CEPD Specialist their lack of interest in joint planning and program participation.
- D) To assure equitable opportunity for participation in each shared-time program, enrollment from each district should be based upon that district's percentage of the total grade 9-12 enrollment in the participating districts. EXAMPLE:

Sch. Dist.	9-12	Percent	Enrollment Based On	
	<u>Enrollment</u>		<u>22</u>	<u>Student Class</u>
A.	225	15%	3	
B.	347	22	5	
C.	182	12	3	
D.	652	42	9	
E.	134	9	2	
	<u>1,540</u>	<u>100%</u>	<u>22</u>	

- E) Jointly planned shared-time programs within large districts having more than one high school should assure students from each high school an equitable opportunity for participation in each shared-time program. This can be achieved by applying the procedure identified in D) to each participating high school.
- F) Planning of transportation routes and class schedules should assure maximum efficiency in transportation arrangements. Cooperative use of transportation vehicles within and between districts should take place whenever feasible. Use of private cars under contract should be limited to those situations which cannot be handled effectively or efficiently by using school owned vehicles. Individual students using family vehicles should be discouraged.
- G) Annual approval of shared-time programs will be handled in the following manner:

New Programs for which a VE-4001 is submitted will be reviewed by the Vocational-Technical Education Service staff as part of the approval process.

Ongoing Programs - A printout of all ongoing shared-time programs based on Fourth Friday Report data (Form VE-4483B) will be mailed to each CEPD. This printout will serve as the approval mechanism for shared-time programs annually.

CONSTRUCTION/RENOVATION OF AREA VOCATIONAL-TECHNICAL EDUCATION CENTERS

I. OBJECTIVES

Assist local educational agencies to expand and improve vocational-technical education facilities and programs.

II. DEFINITIONS

A) Area Vocational-Technical Education Center

An area vocational-technical education center is a secondary and/or post-secondary facility designated by the State Superintendent of Public Instruction to serve a geographical region of the state.

B) Eligible Construction

Eligible construction includes construction of new buildings and expansion, remodeling and alteration of existing buildings, fixed equipment, and site grading and improvement. Site acquisition costs are eligible if property on which the facility will be located was purchased within one year of project approval. Eligible construction also encompasses architectural engineering, and inspection expenses incurred subsequent to the date of site selection. It does not include furnishings and moveable equipment. To cover situations where an expenditure is only partly attributable to an eligible purpose, a justification basis must be developed to substantiate the proration of construction for eligible and non-eligible sections of a school plant.

C) Eligible Facilities

Eligible facilities mean the facilities of an area vocational education center including: instructional and auxillary rooms and space necessary to operate a program of vocational instruction at normal capacity (in accordance with the Michigan State Plan for Vocational Education and the laws and customs of the state), such as classrooms, libraries, laboratories, and workshops. This would not include facilities intended primarily for events for which admission is to be charged to the public, such as single purpose auditoriums, indoor arenas, or outdoor stadiums.

III. CRITERIA FOR CONSTRUCTION PROJECT APPROVAL

Facilities must be located within a geographic region designated by the State Board of Education as a service area to provide area vocational-technical programs. The proposed facilities must be

compatible with long-range area vocational program plans for the region. Procedures for obtaining area vocational designation are described in Tab II, Section L.

IV. APPLICATION PROCEDURES

An education agency should clearly determine its eligibility for initiating a construction grant request before initiating application procedures. Once eligibility is determined, Form VE-4050, Application for Area Vocational-Technical Construction Grant, should be requested from the Vocational-Technical Education Service, Program Development & Operation Unit, at telephone (517) 373-3365.

PLANNING OCCUPATIONAL EDUCATION FACILITIES

Supplement To
School Plant Planning Handbook
Bulletin 412 (Rev.)
October, 1973

FOREWORD

This document is designed as a supplement to the "School Plant Planning Handbook, Bulletin #412", published by the Michigan Department of Education. Its primary purpose is to provide resources in the form of rules of thumb for those actively involved in the planning of facilities which are to house occupational education programs. The data in these guidelines are the result of a review and synthesis of existing construction guides established by those states who are actively providing occupational education. They should not be interpreted as absolute, but merely an attempt to fill a void which seems to exist between those who develop the educational specifications and those responsible for providing the graphic solutions.

DEFINITIONS *

Acoustical Clouds

Panels designed to absorb and/or redirect sound. These panels are suspended below the surface of the ceiling and may be slightly inclined to improve their effectiveness.

Ancillary Space

Any space within the facility which is devoted to activities other than instructional activities, e.g. general storage, hallways, rest rooms, mechanical space, etc. NOTE: Laboratory storage is not to be considered ancillary space.

Building Systems **

An assembly of building sub-systems and components, and the rules for putting them together in a building. Normally, these components are mass-produced and used for specific generic projects in a construction program.

Closed Building System **

A building system whose sub-systems are restricted to that one building system. It is produced through a single manufacturer or a commercial association of manufacturers or through bidding conditions requiring that sub-systems be compatible with only one manufacturer's sub-system at each interface.

Compatibility **

The ability to integrate two or more different building sub-systems (e.g., structure and air-conditioning) at their interfaces.

Industrialized Building System **

A building system organized to convert raw materials by capital-intensive activities such as mechanization and automation. Non-industrialized building is a labor-intensive activity.

* Some of the terms defined are not used in the immediate text, however, they are popular in the profession and have, therefore, been included to further facilitate communication.

** Griffin, C.W., Jr., Systems: An Approach to School Construction, 1st ed. Library of Congress, 1971.

Instructional Area

Classroom - An area specifically designed for lecture/discussion purposes.

Extra Heavy Laboratory - An area similar in nature to an automotive laboratory, diesel laboratory, or farm and industrial equipment laboratory, in that the live models with which the students work (cars, trucks, tractors, etc.) demand large spaces and the physical circulation of both student and equipment is heavy.

Heavy Laboratory - An area similar in nature to a machine shop or commercial foods in that the equipment is relatively heavy (lathes, milling machines, kitchen equipment, etc.) and the physical circulation is heavy.

Light Laboratory - An area similar to a drafting room, or simulated office in which the equipment is light (desks, drawing tables, thermal, etc.) and the physical circulation is generally held at a minimum.

Medium Laboratory - An area similar to a health occupations laboratory, a distributive education laboratory, or possibly a welding laboratory, in which the physical circulation is heavy, but the equipment requirements remain relatively light (or equipment is heavy and physical circulation is light).

Interface **

A common boundary, or connection between two sub-systems, e.g., bolted clamps anchoring relocatable partitions to lighting coffer frames at the ceiling plane.

Module **

A basic dimensional unit, normally set by the size of the lighting coffer, ceiling panel, structural unit, or other basic sub-system. Room dimensions are usually multiples of the module, and the module itself, may be a multiple of some small spatial dimension needed to accommodate some building components, e.g., lockers.

Open Building System **

A building system whose sub-systems are interchangeable with other sub-systems. Open systems are usually produced in response to bidding conditions requiring each sub-system to be compatible with two or more sub-systems at each interface (thus assuring virtually universal interchangeability).

** Griffin, C.W., Jr., Systems: An Approach to School Construction, 1st ed. Library of Congress, 1971.

Performance Criteria **

Technical requirements for sub-systems specifying what they must do instead of what they must look like or be made of, e.g., that they must meet certain standards of strength, fire resistance, durability, insulating quality. Performance bidding is one way of retaining maximum freedom for bidders to select materials and fabrication and installation methods.

Sending End

The sending or source end of a classroom is the end most commonly used by the instructor when presenting a lecture.

Sub-System **

Part of a building system defined for a specific function, and comprising components and materials needed to fulfill that function, e.g., the air-conditioning sub-system and its chillers, fans, pumps, ducts, temperature and humidity controls, etc.

Systems Building **

A process for building construction, featuring (1) study of user requirements, (2) establishment of performance criteria, (3) integration of sub-systems into a coordinated whole, and (4) testing (or certification) of sub-systems.

User Requirements **

Stated criteria, sometimes in technical terms, designed to satisfy teachers' and students' needs. For example the general user requirements of a comfortable thermal environment may be translated into specific user requirements, e.g., 72° F temperature, with a tolerance of 2° F, when outside temperature exceeds 90° F. This user requirement would later be incorporated into the performance criteria of the air-conditioning sub-system.

** Griffin, C.W., Jr., Systems: An Approach to School Construction, 1st ed. Library of Congress, 1971.

GENERAL DESIGN CONSIDERATIONS

The housing of occupational education programs is the prime function of an occupational education facility. It is important, therefore, that all of the program offerings be developed in depth prior to initiating the design of the facility. This will insure a building which will complement and not compromise the activities which take place within it.

There is an old cliché, "Simplicity is the essence of good design." This is particularly true in the design of occupational education facilities. An attempt should be made to maintain clean, simple lines without sacrificing the aesthetic quality of the structure. Extremes in buildings which, on one hand incorporate a high degree of ornamentation, and on the other tend to become very spartan in appearance should be avoided. The facility should be designed to blend with its surroundings.

PROVISIONS FOR THE DISADVANTAGED AND PHYSICALLY AND/OR MENTALLY HANDICAPPED

The design of the facility must be such that it promotes disadvantaged and physically and/or mentally handicapped into the main stream of occupational education. (Refer to Public Act I of 1966, "Making Facilities Accessible for the Physically Handicapped.") This document is available upon request from the State of Michigan, Department of Education, Office of the Supervisor of School Organization and Plant Planning Program and the State Building Division. In addition to the information contained in this document, the following provisions should be considered.

1. Provide access for the handicapped at the primary entrance of the facility.

2. Provision for one automatic door opener at a primary entrance of the facility (manually operable also).
3. Provision for parking for the physically handicapped which is located within fifty feet of the primary entrance.

CONSTRUCTION SYSTEMS

One of the primary efforts in the construction of occupational education facilities should be the improvement of the quality-cost ratio. In the past, labor-intensive, bricks and mortar, non-industrialized approaches to construction have commonly been employed. However, as we consider today's economic climate, it becomes apparent that a streamlining of the process is essential.

There are two approaches which should be explored, building systems, and system building. These may be employed individually or in concert.

In situations in which building systems are employed, the owner should be aware of the fact that there are both open building systems and closed building systems. And, that while on the surface the closed system seems logically to be the most economical, the built-in flexibility which is inherent in the open building systems, in many cases negates this line of reasoning.

Regardless of the approach which is taken, provision must be made for expansion. Some of the facilities will be constructed in stages, others will require additions due to the increase in student population. Initial units should, therefore, be designed within the guidelines of a carefully defined long-range plan.

Some general rules for expandibility are:

- a. The mechanical systems should be designed to adapt to future plans.
- b. Access to heating lines, water lines, electrical service, clocks, air-conditioning, and public address systems should be provided for future expansion.
- c. Corridors should be planned to permit other units to be added.
- d. Consideration should be given to the availability of materials used in the initial construction for future expansion.

SPACE ALLOCATION

The following "ranges" for instructional areas should be considered "rules of thumb", for determining square footage requirements for the instructional areas which are to be housed in the proposed facility.

SQUARE FOOT RANGES FOR INSTRUCTIONAL AREAS ON A PER STUDENT BASIS

TYPE OF INSTRUCTIONAL AREA *	SQ. FT./STUDENT RANGE (INCLUDING STORAGE)		
	MINIMUM		OPTIMUM
Classroom	25	to	30
Light Laboratory	50	to	65
Medium Laboratory	80	to	100
Heavy Laboratory	130	to	150
Extra Heavy Laboratory	180	to	200

NOTE: As an initial estimate of the total square footage of the project, the following formula can be used: Maximum single shift enrollment X 170 square feet.

* See Definitions.

Circulation:

The area assigned to circulation, (corridors, lobbies, etc.) may range from 7% to 12% of the total square footage of the structure. (In all cases, circulation should be held to an absolute minimum.)

Ancillary Space (Excluding Circulation):

The area assigned to ancillary space should range from 10% to 15% of the total square footage of the structure.

Offices:

Offices are of two basic types, general and administrative. Their number and location will vary greatly depending upon the philosophy upon which the facility is developed. For example, in some situations it may be desirable to group the general offices for staff in an area close to the administrative offices while in other situations the general offices may be scattered throughout the building or even non-existent. The primary factor that will affect the size and number of offices within a facility is that the space allotted must be included as part of the 10% to 15% of the total square footage of the structure which is identified as ancillary space. As a general rule, 100 square feet per general office, and 150 square feet per administrative office is adequate.

Recommended Ceiling Height:

To reduce construction costs variations in roof height should be held to a minimum. Ceiling heights, on the other hand, will vary with the laboratory. Generally, classrooms, offices, and those laboratories which are classified as light and medium will require 9' - 0" ceilings. The heavy laboratories, depending on their function, may require 9' - 0" or 12' - 0" ceilings,

while the extra heavy will nearly always require 16' - 0" ceilings. (NOTE: Minimum ceiling in any facility should be 9' - 0".)

Laboratory Storage:

Storage requirements will vary from laboratory to laboratory, however, it can usually be broken down into four basic types:

- | | |
|---------------------------|------------------------------|
| 1. Wall and Base Cabinets | 3. Portable Storage Cabinets |
| 2. Bench Storage | 4. Storage Room |

Since 1, 2, and 3 normally fall under the category of special equipment and are not, therefore, part of the construction package, this document is primarily concerned with the storage room.

Storage Room:

Whenever possible, the storage room should be located in such a manner that it does not interrupt the flow of traffic or create projections in the laboratory which will impair the utility of the space. (Preferably this room should be rectangular in shape.) Storage room partitions should be of material which is appropriate for the specific laboratory. For example, expanded metal and frame partitions would be applicable for machine shop requirements or a distributive education storage area. Still, another option would be light weight masonry block which might serve both areas equally well.

As a basic rule of thumb, the space allotted to storage within a specific laboratory should range from 10% to 15% of the total square footage of that laboratory. NOTE: THE ABOVE MENTIONED IS SUBJECT TO THE APPROVAL OF THE STATE FIRE MARSHAL.

Storage of Volatile Materials:

Storage rooms which are provided for dangerous chemicals or flammable liquids must be constructed of materials which will provide a one hour fire rating and be equipped with self-closing "B" label doors at all openings onto corridors or places of public assembly. In addition, the room should be vented to the outside and have a blow out door or a blow out wall. Flammable storage regulations require perimeter drain. NOTE: THE ABOVE MENTIONED IS SUBJECT TO THE APPROVAL OF THE STATE FIRE MARSHAL.

LEARNING ENVIRONMENT

School facilities, just as any other instructional aid, must be designed with the student's physiological and psychological needs in mind. It is important to note that the needs do not change as he/she moves from the English classroom to the automotive laboratory. As the state of the art increases in sophistication, it becomes more apparent that the learning environment is a prime consideration in the design of school facilities. The following are factors which must be considered:

1. Acoustical Design
2. Illumination
3. Atmospheric Control
4. Color Dynamics

ACOUSTICAL DESIGN CONSIDERATIONS

As the design of educational facilities moves toward the "open planning" concept, sound control becomes increasingly important. There are three primary surfaces, (1) ceilings, (2) walls, and (3) floors, which must be considered.

Ceilings:

Ceiling systems in the light to medium laboratories offer little or no problem. Acoustical tile and ceiling systems are available with a wide range of absorption coefficients. These are usually installed by one or two methods, either by suspending a grid or surface mounting.

In the heavier laboratories, however, ceiling materials do tend to present a problem. Three possible approaches which might be taken are: (1) the use

of acoustical decking, (2) the use of acoustical clouds which are suspended from structure, or (3) the use of a combination of both acoustical decking and acoustical clouds.

Regardless of the approach taken, a minimum ceiling absorption of 60%, and preferably 75% should be maintained in all areas. (Office, classrooms, light laboratories, medium laboratories, heavy laboratories and extra heavy laboratories.)

Walls:

When selecting interior wall finishes, smooth hard surfaces should be avoided. The exception to this would be the sending or source end of a classroom.

One of the least expensive and most efficient (acoustically speaking) materials which can be used in the construction of walls, is light weight masonry block. Some other approaches which can be taken to increase sound control, are wall mounted acoustical panels, heavy gathered draperies and wall mounted carpet, depending upon the area and the degree of flexibility desired.

Floors:

Last but not least, probably the most effective means of sound control is acoustical floor covering (carpet). This tends to control the sound closest to its source. It is recommended that this type of acoustical treatment be employed in any area to which lends itself, especially the classroom, office, light and medium laboratories which have built-in capabilities for flexibility. (NOTE: Additional considerations may be necessary to control static electricity in some laboratory situations.)

The following are some acoustical do's and don't's, as presented by Daniel S. Briggs, Vincent G. Kling and Associates, Philadelphia, Pennsylvania, and Lyle F. Yerges, Consulting Engineer, Downers Grove, Illinois in the sixth edition of Architectural Graphic Standards.

CONSIDERATIONS FOR THE ACOUSTICAL DESIGN OF SPACES

DO'S

1. Do use absorptive materials on surfaces which might otherwise cause objectionable reflections.
2. Do use diffuse, convex surfaces designed to distribute sound to listening areas.
3. Do keep the "sending" or source end of a room hard and reflective.
4. Do maintain the integrity of walls and enclosing surfaces, seal all holes and openings.
5. Do consider the mechanical and electrical equipment as an integral part of the building's acoustical design.
6. Do use qualified professional advice on any space with acoustically critical requirements.
7. Do avoid noise problems by choosing quiet equipment, acoustically adequate constructions, choose all materials for their acoustical properties as well as for their other characteristics.

DON'T'S

1. Don't assume that acoustical design means covering the entire ceiling with acoustical tile.
2. Don't use "pure" geometric shapes. Concave, circular, or elliptical surfaces, cubical rooms, etc. require special consideration.
3. Don't surround the acoustical "source" with absorbent materials.
4. Don't penetrate or pierce walls, floors, or enclosing partitions unless absolutely necessary.
5. Don't ignore the mechanical and electrical systems; they not only generate noise, but they provide "leaks" and paths for sound transmission.
6. Don't assume that sound control is some form of applied "treatment" or hardware accessory.
7. Don't choose equipment based upon initial cost alone, assuming that problems which may arise can be cheaply corrected later with acoustical materials.

ILLUMINATION

Visual comfort and efficiency are achieved where the total environment has been conditioned and balanced. In other words, a consistently high level of light should be avoided since this tends to create a sterile hospital like environment. By varying the light levels, an environment which is not only physiologically adequate, but also psychologically pleasing can be achieved. Lighting fixtures should not produce a surface brightness on the fixture or the ceiling that exceeds ten times the tasks brightness. In no case should a bare bulb be visible. All areas should have lighting fixtures sufficient to provide and maintain a minimum amount of footcandle lighting evenly distributed at the working surface level. (NOTE: The efficiency of lighting systems will be affected by the color of the floor, ceiling and walls.)

The following are minimum levels of illumination for various tasks as recommended by the Illumination Engineering Society:

Illumination Recommendations Based on I.E.S.

Footcandles:

- 1.5 -- Parking
- 5 -- Parking - TV Viewing - Construction
- 10 -- Storage - Rough Stock - Receiving
- 20 -- Lobbies - Auditorium - Corridor - Stairway - Dining
- 30 -- Lavatories - Corridors - Conference Rooms - Casual Desk Work - Cafeterias
- 50 -- Classrooms - Stores - Reading Rooms - Testing - Inspection - Rough Assembly
- 70 -- Proof Reading - General Assembly - Testing - Inspection

- 100 -- Drafting - General Assembly - Testing - Inspection - Counter Displays
- 150 -- Fine Drafting - Fine Assembly - Testing - Inspection - Display Lighting Sewing - Severe and Prolonged Seeing Tasks - Medium Severe Office Tasks
- 200 -- Fine Drafting - Extra Fine Assembly - Testing - Severe Office Tasks - Sewing
- 500 -- Color Identification - Minor Surgery - Special Inspection - Testing Very Severe and Prolonged Visual Tasks

NOTE: Task brightness is based on foot lamberts which, in turn, is derived from footcandles multiplied by the reflective factor of the working surface.

ATMOSPHERIC CONTROL

Thermal environment is gaining recognition as a factor in learning, just as acoustics and lighting have. No longer are the heating, ventilating, and air-conditioning systems considered only in light of maintaining healthful conditions, but also as an environmental component which is necessary to provide for an optimal learning situation. This requires that interior atmospheric conditions be controlled within relatively close tolerances. Research indicates that the temperature should range from 70-74° F in classrooms and light laboratories and 68-70° F in the medium, heavy, and extra heavy laboratories. The relative humidity should range from 40-60% and the lineal movement of air should range from 20-40 fpm (feet per minute). These tolerances should be maintained throughout the facility (all laboratories included).

Special Ventilation:

Various areas in the facility create special ventilating problems. Spaces with large numbers of people assembled should have ample ventilation and provide at least one and one-half cfm (cubic feet per minute) per square

foot, if air-conditioned, and at least 15 cfm per person and at least 2 cfm per square foot using outside air and mechanical ventilating system.

Toilet rooms, food laboratories, kitchens, and other spaces generating odors should have positive exhaust ventilating facilities.

Fume hoods in laboratories should have non-corrosive ducts and have a positive exhaust control.

Drying rooms in the vocational shops should be provided with separate mechanical ventilators.

Ventilation:

- a. Mechanical power exhaust ventilation should be installed in all shop facilities in which dust, gases, fumes, or odors might be produced in sufficient quantity as to be deemed to be prejudicial to the health and well being of occupants.
- b. A built-in mechanical exhaust system must be provided for each internal combustion engine, heat treating furnace, spray painting booth, and the outboard motor test tank.
- c. Welding areas should be equipped with a mechanical exhaust system specifically designed for such a purpose.
- d. Exhaust collecting hoods should be a minimum of 7' - 6" above finished floor.
- e. Mechanical dust and chip collecting systems are highly recommended for the woodworking area.
- f. Consideration should be given to cleaning and recycling tempered air in industrial laboratories.

NOTE: All information on pages 11-16 was directly taken from:

Considerations for Laboratory Planning, by Dr. George Mehallis

SERVICE SYSTEMS

Electrical:

As teaching techniques increase in sophistication, electrical installations become more complex and increasingly important. The following is a check list of electrical considerations:

- a. All laboratory facilities should be serviced with at least three-phase, four wire, 208-220 volt service. Some new installations carry 480 volts.
- b. All motors, one-half horsepower or more, should be three-phase and conform to the Fire Underwriters and N.E.M.A. codes (National Electric Manufacturer's Association).
- c. Emergency cut-off switches preferably with the mushroom type push buttons, and properly labeled, are required for safety and should be strategically located on each wall of the laboratory so that the instructor will always be with reasonable proximity of such a switch when the class is in session.
- d. Power controls should be centralized on a flush mounted, locked master control panel with a "Power On" pilot light and should be located near the entrance door inside the laboratory.
- e. For greater flexibility, additional grounded type wall outlets should be provided on approximately 10' - 0" centers along the wall of the laboratory. Location of equipment in the laboratory should be planned in advance to enable the architect to establish the necessary outlets and emergency switches which must be included in the preliminary drawings. NOTE: "Power poles" can add much to the flexibility of some laboratories.
- f. In all laboratory or laboratories, every portable and stationary electrically operated device or motor such as a grinder, heating oven, portable hand and stand lamps, should have its framework effectively grounded. All portable electric tools and machinery should be equipped with ground connector plugs to fit grounded receptacles in conformity with national safety regulations. NOTE: The use of busduct is recommended for power distribution in heavy shops.
- g. Individual pieces of motorized electrical equipment, except portable hand tools, should be controlled by a magnetic type switch or other similar arrangement whereby each piece of equipment must be manually reactivated after current interruption.

- h. It is necessary that the power requirements, floor area and weight of all equipment and machinery be obtained from manufacturer's catalogs and given to the architect so he can have the weight load distributed and service connections properly located.
- i. Overhead recoil type extension cords are recommended for power mechanics area and other instructional areas utilizing portable electric equipment. Electrical receptacles extending above the floor away from the wall are not recommended. Such electrical outlets limit flexibility and change and present tripping hazards.
- j. Machinery located away from the wall should be serviced through a junction box with a rigid conduit, securely braced and bracketed, extending to the electrical controls of the machine.
- k. A waterproof exterior outlet should be provided outside each overhead door of any power mechanics or automotive laboratory.
- l. Raceways should be provided in all instructional areas for television antenna and/or closed circuit systems.
- m. The air compressor should be located in such a manner that it can be acoustically isolated.
- n. A separate conduit should be provided for the fire alarm system.
- o. Regulated pressurized air outlets should be provided at regular intervals around the walls of machine shops, auto shops, fluid power mechanics laboratory, and any other heavy or extra heavy laboratories where air is needed.
- p. Facilities housing commercial food programs should be equipped with an auxiliary generator to insure the operation of food freezers and coolers.

General Plumbing:

- a. Auto mechanics laboratories should have, near the outside doors, a grill covered drainage trough with a pitched bottom and a hose bib at the highest level for flushing drains.
- b. A water supply should be located in the auto laboratory and near the outboard motor test tank. A water supply should also be inside the building, but near the outside door.
- c. Plumbing lines, sumps and traps should be located so they are easily accessible for maintenance and repair.
- d. Clay interceptor traps should be attached to the sink in any ceramic arts areas to keep clay, plaster and other solids from clogging the sewer lines.
- e. When acid or other corrosive chemicals are used, as in electroplating, etching or photography, acid-resistant sinks, drains, traps and piping should be installed.

- f. Avoid placing machinery on or extremely close to pipes and columns because noise and vibration will be transmitted needlessly to other areas.
- g. Each laboratory should have hot and cold running water.
- h. A wash station should be provided for each five students in heavy and extra heavy laboratories. A built-in kitchen type sink is adequate in the mechanical drawing room and other medium and light laboratories.
- i. Wash stations should be located near corridor entrance and situated away from the electrical control panel.
- j. Wall surfaces at wash basins in laboratories should be maintenance free.

Sanitary Plumbing:

Well located and properly maintained sanitary facilities are essential for the health and comfort of the school occupants. NOTE: REFER TO P.A. I, 1966, "MAKING FACILITIES ACCESSIBLE FOR THE PHYSICALLY HANDICAPPED".

- a. Water Supply - A safe water supply which is capable of providing 30 gallons per day based on single session capacity of the facility.
- b. Toilet Rooms - Toilet facilities should be available for both sexes on each floor of each building.

Floor drains and hose bibs should be provided in each gang toilet room.

Soap dispensers, waste containers, mirrors, back shelves, and hand drying facilities should be provided in each gang toilet.

Hot and cold water should be provided to all lavatories.
- c. Water Closets, Urinals, Lavatories, & Drinking Fountains - The following table indicates the ratios of sanitary fixtures which should be considered minimum. Based on single session capacity of facility.

Enrollment						Lavatories	Drinking
Boys	Girls	Total	WC/Girls	WC/Boys	Urinals/Boys	Boys/Girls	Fountains
150	150	300	4	2	4	4	3
200	200	400	5	3	5	5	4
300	300	600	7	4	7	6	5
400	400	800	9	5	9	7	7
500	500	1000	11	6	11	9	8
600	600	1200	13	7	13	11	9
800	800	1600	16	8	16	12	11
1000	1000	2000	18	9	17	13	12

NOTE: Additional information is available in Bulletin 412, Chart VI Health Standards.

- d. Service Sink - A service sink with both hot and cold water should be provided in each custodian's closet and at least one custodian's closet should be located on each floor.

SPECIAL SAFETY CONSIDERATIONS

1. The floor around each power machine should be coated with a non-slip surface.
2. Safety zones, color coded, should be placed around each piece of power equipment, and wherever else necessary, such as for marking aisles of travel, or storage areas.
3. Distinct aisles of travel should be provided for free flow of student traffic between all areas and points of common usage, such as storage rooms, finishing rooms and common machine areas. Aisles of travel should not be less than three feet in width, and preferably four feet.
4. Safety and full visibility by the instructor are prime considerations in the arrangement of work areas and work stations.
5. Fire extinguishers should be a dry chemical type and should be conveniently located near points of danger and marked or labeled conspicuously.
6. Compressed air distribution lines should have a diaphragm type regulating valve to reduce the pressure to the amount required for safe operation of equipment.
7. Chip shields in the machine shop and ultra-violet shields in the welding shops should be used for eye safety.
8. Spacing between benches, machinery, equipment and aisles should be sufficient for safety and free passage. This is determined by the nature of the work and the equipment involved, but should be not less than three feet and preferably four feet.

9. Guard rails installed to separate machine areas from handwork areas are generally not recommended, but guard rails are recommended to separate flywheel machinery from one another and from other work areas. This would apply to punch presses and printing presses.
10. A first aid cabinet of approved size and content should be provided in each laboratory.
11. An approved fire blanket should be provided in any area where grease and volatile liquids are used. Auto shops, bakery and home economics rooms especially need this form of safety equipment.
12. Volatile liquids must be stored in approved safety cans and bulk storage of such liquids inside the shop is prohibited by insurance regulations and fire laws.
13. Paints, finishes and thinners must be housed in metal cabinets in the shop or laboratory.
14. For fire-spread prevention, it is recommended that concrete step-up and step-down structure between corridor and shops where gasoline and diesel fuels are used be provided.
15. Increasingly, states are passing laws requiring the wearing of safety goggles or glasses, even by visitors, in all shops. Accordingly, there are available eye safety cabinets with sterilizers for general use. One of these should be specified for nearly every type of facility.
16. Provide first aid station with a cot for those who might become ill during the school day.

NOTE: ALL CONSIDERATIONS LISTED ABOVE SUBJECT TO FIRE MARSHAL APPROVAL.

SITE

In planning occupational education facilities, just as in any other educational facilities, site is a prime component. Criteria for the selection of site can be divided into two areas of major concern, the appropriateness of the site and the economy of the site. The following lists constitute considerations which should be made with respect to the above mentioned concerns.

Appropriateness of Site:

1. A site should be selected which is close to the population center of the area which will be served, or which will minimize the mean distance traveled in commuting from the home school to the area center.
2. When possible, a site should be selected which will stimulate and promote the economic growth and development of the area.
3. Close proximity to airport approaches, railroads or any other situation which produces ambient noise of a level which will detract from the learning process should be avoided.
4. A site should be selected which is highly accessible to transportation arteries.

Economy of Site:

1. Whenever possible a site should be selected which has existing utilities and service available.
2. Careful consideration should be given to the soil conditions of the site to avoid excessive cost of construction due to unique footing requirements.
3. Avoid the uneconomic, hazardous, or unnecessary use of flood plains when selecting a site.
4. Topography of the area should be such that it does not require massive and economically excessive alterations to gain optimum use of the site.

SPACE GUIDELINES FOR VOCATIONAL PROGRAMS

AGRICULTURE

<u>CIP Code</u>	<u>Descriptor</u>	<u>Per-Pupil Square Foot/Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
01.0301*	Production Agriculture	50	65
01.0201	Agricultural Mechanics	180	200
01.0601*	Ornamental Horticulture	50**	100
03.0101*	Renewable Natural Resources	130	150

BUSINESS AND OFFICE EDUCATION

<u>CIP Code</u>	<u>Descriptor</u>	<u>Per-Pupil Square Foot/Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
07.0101	Accounting and Computing	50	65
07.0301	Business Data Processing	50	65
07.0601	Secretarial and Related Programs	50	65
07.9999	Business and Office Cluster	50	65

HEALTH OCCUPATIONS EDUCATION

<u>CIP Code</u>	<u>Descriptor</u>	<u>Per-Pupil Square Foot/Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
17.0100	Dental Assisting (Course 01)	80	100
17.0300	Medical Laboratory Assisting (Course 01)	30	50
	Histology (Course 02)	30	50

*These areas will need additional outdoor and/or community facilities to supplement the indoor school facilities.

**Additional greenhouse space also required, minimum of 1,700 square feet.

HEALTH OCCUPATIONS EDUCATION (Cont.)

<u>CIP Code</u>	<u>Descriptor</u>	<u>Per-Pupil Square Foot/Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
17.0503	Medical Office Assistant (Course 01)	30	50
	Optometric Assistant (Course 02)	30	50
17.0507	Pharmacy Assisting	65	80
17.0600	Nursing Assistant Aide (Course 01)	65	80
	Practical Nursing (Course 02)	65	80
	Home Health Aide (Course 03)	65	80
	Surgical Technician (Course 04)	80	100
	Emergency Medical Technician (Course 05)	65	80
17.9900	Health Cluster	80	100

HOME ECONOMICS RELATED OCCUPATIONAL EDUCATION

<u>CIP Code</u>	<u>Descriptor</u>	<u>Per-Pupil Square Foot/Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
20.0201	Child Care Services	80	100
20.0301	Clothing and Textiles Manage- ment, Production and Services	80	100
20.0401	Food Management, Production and Services	130	150
20.0501	Commercial Painting and Interior Treatment	80	100
20.0601	Building Home Management and Supporting Services	80	100

MARKETING EDUCATION

<u>CIP Code</u>	<u>Descriptor</u>	<u>Per-Pupil</u> <u>Square Foot/Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
08.0700	Marketing Education	80	100

TRADE AND INDUSTRIAL EDUCATION

<u>CIP Code</u>	<u>Descriptor</u>	<u>Per-Pupil</u> <u>Square Foot/Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
09.0701	Radio & Television Broadcasting	80	100
12.0403	Cosmetology	80	100
43.0107	Law Enforcement Training	50	65
46.0301	Electrical and Power Transmission Installation	50	65
	Residential Electricity (Course 01)	50	65
	Industrial Electricity (Course 02)	50	65
46.9999	Construction Trades On-Site (Course 01)	*	*
	Construction Trades In-School (Course 02)	130	150
	Masonry (Course 03)	80	100
	Plumbing & Pipefitting (Course 04)	80	100
47.0101	General Electronics (Course 01)	50	65
	Communication Electronics (Course 02)	50	65

*Mobile unit minimum 600 square feet, plus square footage of project house. Mobile units to contain restroom, tool and equipment storage, and on-site classroom.

TRADE AND INDUSTRIAL EDUCATION (Cont.)

<u>CIP Code</u>	<u>Descriptor</u>	<u>Per-Pupil</u> <u>Square Foot/Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
47.0101 (Cont.)	Industrial Electronics (Robotics) (Course 03)	50	65
	Instrumentation (Course 04)	50	65
	Computer Electronics (Course 05)	50	65
47.0102	Business Machine Maintenance (Course 01)	50	50
	Vending Machine Repair (Course 02)	80	100
47.0106	Major Appliance Repair	130	150
47.0201	Heating, Air Conditioning, and Refrigeration	80	100
47.0301	Industrial Equipment Maintenance and Repair	180	200
47.0401	Hydraulics and Pneumatics	130	150
47.0408	Watch Repair	50	65
47.0602	Aircraft Mechanics	180	200
47.0603	Automotive Body Repair	180	200
47.0604	Automotive Mechanics (Auto Specialization)	180	200
47.0605	Diesel Mechanics	180	200
47.0606	Small Engine Repair	50	65
48.0101	Drafting (Occupational) (Course 01) General	50	65
	Architectural Drafting (Course 02)	50	65
	Mechanical Drafting (Course 03)	50	65

TRADE AND INDUSTRIAL EDUCATION (Cont.)

<u>CIP Code</u>	<u>Descriptor</u>	<u>Per-Pupil</u> <u>Square Foot/Range</u>	
		<u>Minimum</u>	<u>Optimum</u>
48.0201	Graphic Arts (Occupations) (Course 01)	80	100
	Commercial Art Occupations (Course 02)	50	65
	Lithography, Photography and Platemaking (Course 03)	80	100
48.0503	Machine Tool Operation/ Machine Shop	130	150
48.0506	Sheet Metal	80	100
48.0508	Welding, Brazing, and Soldering	130	150
48.0604	Plastics (Occupations)	130	150
48.0701	Woodworking and Furniture Making (Course 01)	130	150
	Millwork-Cabinet Making (Course 02)	130	150
49.0101	Air Transportation Aviation Occupations	180	200

TAB III

Special Populations Programs and Services

DISADVANTAGED, HANDICAPPED AND
LIMITED ENGLISH PROFICIENCY PREPARATORY PROGRAMS

I. SECONDARY SPECIAL NEEDS

The Carl Perkins Vocational Education Act of 1984 refers to an identifiable segment of our population as persons with special needs. The legislation describes such persons as disadvantaged, handicapped, and/or persons of limited English proficiency.

Many special needs persons are capable of succeeding in the regular vocational education program with the provision of special services and/or assistance.

II. CRITERIA FOR IDENTIFICATION OF SPECIAL NEEDS STUDENTS

The basic overriding criterion for the identification of a person for participating in a vocational education program for disadvantaged, handicapped, and/or persons of limited English proficiency is inability to succeed in the regular vocational education program without special assistance or service.

A) Disadvantaged: (Academic)

1. Had a 1.5 or lower grade point average on a 4.0 scale in all courses for the school year prior to enrollment in the year being reported.
2. Scores below the 25th percentile on a standardized achievement or aptitude test.
3. Was enrolled in an alternative education program during the year prior to enrollment being reported.
4. Has dropped out from secondary school.

B) Limited English Proficient (LEP):

"Limited English Proficiency," when used with reference to individuals, means individuals--

(1)(i) Who were not born in the United States or whose native language is a language other than English;

(ii) Who come from environments where a language other than

English is dominant; or

(iii) Who are American Indian and Alaskan Native students and who come from environments where a language other than English has had a significant impact on their level of English language proficiency; and

(2) Who by reason thereof, have sufficient difficulty speaking, reading, writing, or understanding the English language to deny such individuals the opportunity to learn successfully in classrooms where the language of instruction is English or to participate fully in our society.

Individuals who have limited English proficiency, as well as those who are dropouts from, or identified as potential dropouts from, secondary school are automatically defined as "academically disadvantaged."

C) Handicapped:

Handicapped students to be served must be enrolled in a Special Education program leading to a high school diploma and must have an individualized educational plan prescribed by an IEPC.

III. REQUIRED COMPONENTS OF ALL SPECIAL NEEDS PROGRAMS

Each local educational agency that receives an allocation of special needs funds shall use those funds to provide information to handicapped and disadvantaged students and their parents concerning the opportunities available in vocational education and the requirements for eligibility for enrollment in vocational education programs, at least one year before the students enter the grade level in which vocational education programs are first generally available in the State, but in no case later than the beginning of the ninth grade.

Each local educational agency specified in the above paragraph shall provide to each handicapped or disadvantaged student that enrolls in a vocational education program--

- (a) An assessment of the interests, abilities, and special needs of that student with respect to completing successfully the vocational education program;
- (b) Special services, including adaptation of curriculum, instruction, equipment, and facilities, designed to meet the needs established;
- (c) Guidance, counseling, and career development activities conducted by professionally trained counselors who are associated with the provision of such special services; and
- (d) Counseling services designed to facilitate the transition from school to post-school employment and career opportunities.

IV. CERTIFICATION

All certified instructional personnel shall meet the qualifications set forth in the Michigan State Plan for Vocational Education. All non-certified personnel shall meet the qualifications set forth in the Michigan State Board of Education policy statement, "Utilization of Non-Certified Personnel in Elementary and Secondary Schools."

SPECIAL NEEDS FUNDING POLICY

I. ELIGIBILITY CRITERIA

- A) Applications must be submitted annually by secondary agencies on the VE-4001-A, Annual Plan for Secondary Vocational Education, and by postsecondary agencies on the VE-4166, Application for Postsecondary Vocational Education Projects for Persons With Special Needs.
- B) Students eligible for services funded by these allocations must be handicapped, disadvantaged, or have limited English proficiency (LEP).
- C) In order to be eligible to receive federal funds, each recipient must provide a match through the expenditure of at least an equal amount of state and/or local funds. This requirement applies to each category of funding: project expenditures for handicapped students must be at least double the amount of the federal handicapped allocation, and project expenditures for disadvantaged students (including LEP) must be at least double the amount of the federal disadvantaged allocation.

II. EXCESS COSTS REQUIREMENT

Funds for handicapped and disadvantaged individuals may be used only for the federal share of expenditures that are limited to supplemental or additional staff, equipment, materials, and services that are not provided to other individuals in vocational education and that are essential to handicapped and disadvantaged individuals to participate in vocational education.

III. FUNDING FORMULA

For each of the two categories (handicapped and disadvantaged), a two-part formula is used to determine amounts for each agency. The first part of the formula utilizes the number of economically disadvantaged students, and the second part utilizes the categorical enrollment in vocational programs of the participating agencies, using the prior year for secondary agencies and two years prior for postsecondary agencies. The criteria used to determine economically disadvantaged students is derived from the Chapter I, ECIA Eligible Counts for

Secondary Agencies and from Pell Grant Recipient Counts for postsecondary agencies.

A) Handicapped Funds

1. One-half (50%) of handicapped funds are allocated on the basis of the number of economically disadvantaged students enrolled in participating fiscal agencies. A percentage factor is obtained for each agency by dividing its number of economically disadvantaged students by the State's total of all participating agencies. Each agency's percentage factor is then multiplied by 50% of the total available federal handicapped funding to determine an amount for that agency.
2. One-half (50%) of handicapped funds are allocated on the basis of the number of handicapped students enrolled in participating fiscal agencies' vocational education programs during the prior year. A percentage factor is obtained for each agency by dividing its number of handicapped vocational education enrollees by the State's total for all participating agencies. Each agency's percentage factor is then multiplied by 50% of the total available federal handicapped funding to determine an amount for that agency.
3. The combination of the two amounts determined by 1 and 2 is the total handicapped allocation for each agency.

B) Disadvantaged Funds

1. One-half (50%) of disadvantaged funds are allocated on the basis of the number of economically disadvantaged students enrolled in participating fiscal agencies. A percentage factor is obtained for each agency by dividing its number of economically disadvantaged students by the State's total for all participating agencies. Each agency's percentage factor is then multiplied by 50% of the total available federal disadvantaged funding to determine an amount for that agency.
2. One-half (50%) of disadvantaged funds are allocated on the basis of the number of disadvantaged students enrolled in participating fiscal agencies' vocational education programs during the prior year. A percentage factor is obtained for each agency by dividing its number of disadvantaged vocational education enrollees by the State's total for all participating agencies. Each agency's percentage factor is then multiplied by 50% of the total available federal disadvantaged funding to determine an amount for that agency.
3. The combination of the two amounts determined by 1 and 2 is the total disadvantaged allocation for each agency.

SINGLE PARENT AND HOMEMAKER PROGRAM

I. INTRODUCTION

The purpose of this program of support for single parents and homemakers is to assure access to vocational education under the Carl D. Perkins Vocational Education Act of 1984. In Michigan, these vocational education programs are approved and reimbursed through the Vocational-Technical Education Service and operate in secondary schools, intermediate school districts and area centers.

Coordination and cooperation with existing services and service providers is required by the legislation. It is not the intent of the legislation nor the Department of Education to supplant or replace presently provided services, but it is the intent to strengthen and improve the accessibility of that which is presently available from local, state and federal sources.

The first step in planning this program is to identify and communicate with the public and private agencies as well as community-based organizations who serve single parents and homemakers within the community. Then cooperation must continue to occur to assure coordination of the delivery of services. Formal evidence that this has happened must be included in the application materials.

Therefore, applicants need to clearly demonstrate how the activities proposed in the application provide for increasing the services available to single parents and homemakers and that the activities do not duplicate services presently available through other agencies in the community.

II. OPERATIONS

A) Eligibility

1. Agency Eligibility. Educational agencies designated as K-12 districts, intermediate school districts or area centers are eligible to receive funds for this program. Community-based organizations are also eligible to apply for and receive monies for this program. It is a requirement that, regardless of fiscal agent, there be cooperative efforts of educational agencies, public service agencies and community-based organizations.
2. Identification and Selection of Participants. Criteria and definitions used to select participants are determined by the local agency. Efforts must be made to identify and

serve the individuals most severely economically and educationally disadvantaged.

Adults may be served by these support services if they:

- a) Have a high school diploma and are not yet 20 years of age by September 1;
- b) do not have a high school diploma and are taking vocational education for credit toward the diploma; or
- c) have a high school diploma, are over 20 years of age and do not reside in a county served by a community college; or
- d) have a high school diploma, are over 20 years of age, yet whose skill level or vocational interests cannot be accommodated by a community college program.

NOTE: Adults described in a) and b) above, when enrolled in vocational education, are reported on the VE-4483A and D form and are reimbursed by state added cost dollars.

B) Application Procedures

1. Applying. The fiscal agent (K-12 school districts, intermediate school districts or area centers) submits a formal application (VE-4648) to its CEPD Coordinator. Community-based organizations send the application (VE-4648) directly to the Special Populations Programs and Services Unit, Vocational-Technical Education Service, Michigan Department of Education.
2. CEPD Action. The CEPD Coordinator certifies to the completeness and accuracy of the K-12, intermediate school district and area center applications and forwards them to the Special Populations Programs and Services Unit, Vocational-Technical Education Service (V-TES), Michigan Department of Education.
3. Notification. After review of the application and discussion as needed with the fiscal agency, V-TES will notify the applicants of approval or disapproval promptly after State Board of Education action. (Approval consists of a letter signed by the Superintendent of Public Instruction and a copy of the approved budget.)

4. Timelines. The VE-4648, "Application for Vocational Education Programs for Single Parent and Homemakers," is available in March. All projects must reapply on an annual basis. The fiscal year operates from July 1 through June 30.

C) Implementation

1. Implementation. The agency, which serves as the fiscal agent for the program, operates it in cooperation with other agencies and organizations which provide services to single parents and/or homemakers within the community.
2. Program Components. Each of the following is considered essential to providing service to single parents and homemakers under the Carl D. Perkins Vocational Education Act of 1984. All components, however, are not intended to be supported by the monies provided resulting in the duplication of services. Coordination and cooperation among community service providers must be evident in the design of this program. In each case, applicants must describe what is to occur and who is providing such services.
 - a) Outreach and Promotion. The goal of outreach is to reach those who are in need of but who would ordinarily not access the services. Activities include those which promote the program in general and those specially designed to reach out into the community.
 - b) Assessment of Aptitude, Interests, and Special Needs. Testing may be already available within the organization or may be purchased. The process of testing, assessing, and determining the individual's educational plan must be described and appropriate.
 - c) Career Guidance and Personal Counseling. This component must address career exploration and guidance as well as counseling for self-concept improvement and the improvement of family relationships. Career exploration must include consideration of nontraditional occupations.
 - d) Independent Living Skills. Independent living skills are defined as those skills necessary to manage day-to-day living, including but not necessarily limited to: 1) identification and management of resources (money, time, energy, etc.); 2) building support systems; 3) decision-making; 4) social skills focused at employer/employee relationships; and 5) communication skills.

- e) Vocational/Occupational Skills Training. The job training available shall include that regular approved vocational education which operates under the Carl Perkins Vocational Education Act of 1984 and State Added Cost. The purpose of this program is to assure access for single parents and homemakers to those programs. Also, support services must be made available once participants are placed in a training program to assure successful completion.
- f) Transportation and Child Care. Transportation and/or child care is provided for by this program if they are needed by participants.
- g) Job Placement. Job placement services include job readiness skills training, including resume development, interviewing, and job search skills. After receiving training in the regular vocational education programs, some job placement services are part of the regular program and single parents and homemakers must access those services. However, for this population additional placement help may be provided by this program and job development may be necessary to assure placement.
- h) Evaluation and Follow-Up. Evaluation includes that of participant progress as well as evaluating those that exit the program. A model program evaluation system has been developed and implemented and is available upon request.
- i) Advocacy Committee. Each program for single parents and homemakers must maintain an advocacy committee consisting of the decisionmakers from the local community service providers. This committee provides planning, operation, and evaluation input to improve program performance as well as the coordination of efforts.
- j) Cooperative/Coordinated Efforts. The Carl D. Perkins Vocational Education Act of 1984 is clear in its purpose for the single parent and homemaker program. That purpose is to coordinate the already existing services and then to provide those not available yet needed. A thorough analysis of those existing services in terms of the above components is a necessary part of applications.

D) Funding Policy

All K-12 districts, intermediate school districts and community-based organizations are eligible to apply for monies to support single parents and homemakers. Programs are reimbursed at 100% of the approved costs.

The goal is to provide the highest level of services in the most economic manner. Applicants who can document a high degree of cooperation and coordination with existing service providers, both inter and intra agency, will be given priority. Funding is on a competitive basis.

Applications will not be considered for funding without the identification of a local vocational education sex equity coordinator. This sex equity coordinator must have a role in the planning and conducting of the program.

All applications will be reviewed by the Special Populations Programs and Services Unit personnel. Final funding recommendations will be the responsibility of the Vocational-Technical Education Service and approved by the State Board of Education.

III. REPORTING, RECORDKEEPING AND MONITORING

A) Recordkeeping. The fiscal agent must keep files which include:

1. A copy of the application (VE-4648) with any attachments;
2. The approval letter;
3. The most current approved budget;
4. Copies of requests for and approvals of substitutions and/or additions made after approval of the original application;
5. A name roster of individuals participating;
6. Documentation of each individual's eligibility;
7. Results of the assessment of aptitude, interests and special needs;
8. A copy of the individual education plans and any updates;
9. A record of progress according to the individual education plans;
10. Documentation of agreements with other agencies/services providers for coordinating service delivery; and
11. Copies of all reports made to V-TES (the interim report, the final report, and financial reports).

B) Reporting

1. Interim Report. The fiscal agency must file an interim report with V-TES on Form VE-4648A in February.
2. Final Reports. Two final reports are submitted concurrently and are required. These reports are due 30 days following liquidation of the final expenditure or not later than 60 days following the ending date of the project.
 - a) Form DS-4044, "Expenditure Report".
 - b) Form VE-4648B, "Final Report for Vocational Education Programs for Single Parents and Homemakers".

C) Evaluation

A model program evaluation system has been developed to collect, analyze, and report project activities. The model forms and handbooks are available upon request.

IV. FURTHER INFORMATION

- A) Sex Equity Technical Assistance Team
Wayne County Intermediate School District
P. O. Box 807
Wayne, MI 48184
(313) 467-1427
(313) 467-1380
(313) 467-1394
- B) Sherry L. Anderson, Sex Equity Coordinator
Special Populations Programs and Services Unit
Vocational-Technical Education Service
Michigan Department of Education
P. O. Box 30009
Lansing, MI 48909
(517) 373-3388

NONTRADITIONAL INCENTIVE PROGRAM

I. INTRODUCTION

This program is designed to promote successful vocational education experiences for nontraditional students in programs which have been traditionally identified for either girls or boys. Based on 1983-84 statewide completions, any program (identified by CIP Code) which had more than 75% completion by one sex were identified as "traditional" and are eligible to receive incentive dollars.

In order to encourage activities to eliminate sex role stereotyping in these identified programs, the Vocational-Technical Education Services of the Michigan Department of Education is providing an incentive for each nontraditional student who successfully completes training in an eligible program.

An incentive of \$350 per nontraditional completer is provided to each fiscal agent which applies. If a district applies, the incentive per nontraditional completer, as reported on the VE-4301 - "Secondary Unduplicated Enrollment and Termination Report," is calculated. If a district or area center has not participated in the past, they are eligible for a \$2,000 planning grant for one year or the incentive, whichever is greater.

II. OPERATIONS

A) Eligibility

1. Any K-12 district, intermediate school district or designated area center that operates reimbursed wage-earning vocational education programs is eligible to apply. The extent to which each fiscal agent will be able to participate is based on the number of nontraditional completers that are reported on the VE-4301 - "Secondary Unduplicated Enrollment Termination Report" for the year previous to the grant year.

2. The vocational education programs which are eligible to receive nontraditional incentive dollars include.

<u>CIP Code</u>	<u>Program Name</u>	<u>Incentive Sex</u>
01.0201	Agricultural Mechanics	Female
01.0301	Agricultural Production	Female
03.0101	Renewable Natural Resources	Female
07.0601	Secretarial Related	Male
07.9999	Business and Office Cluster	Male
12.0403	Cosmetology	Male
17.0100	Dental Occupations Cluster	Male
17.0300	Laboratory Occupation Cluster	Male
17.0503	Medical Office Cluster	Male
17.0600	Nursing Occupation Cluster	Male
17.9900	Health Occupation Cluster	Male
20.0201	Child Care Services	Male
20.0301	Clothing and Textile Production and Services	Male
20.0601	Building and Home Maintenance Services	Female
46.0301	Electrical and Power Transmission Installation	Female
46.9999	Construction Trades	Female
47.0101	Electrical and Electronics Repair	Female
47.0102	Business and Vending Machine Repair	Female
47.0106	Major Appliance Repair	Female
47.0201	Heat, Air Conditioning, and Refrigeration Machines	Female
47.0301	Industrial Equipment Maintenance Repair	Female
47.0401	Hydraulics and Pneumatics	Female
47.0602	Aircraft Mechanics	Female
47.0603	Automotive Body Repair	Female
47.0604	Automotive Mechanics	Female
47.0605	Diesel Mechanics	Female
47.0606	Small Engine and Related Equipment Repair	Female
48.0101	Drafting	Female
48.0503	Machine Tool Operation/ Machine Shop	Female
48.0506	Sheet Metal	Female
48.0508	Welding, Brazing, and Soldering	Female
48.0604	Plastics	Female
48.0701	Woodworking and Furniture Making	Female
49.0101	Air Transportation	Female

B) Application Procedures

1. April

- a) Review present enrollment and predict the number of nontraditional completers which will be reported on the VE-4301 - "Secondary Unduplicated Enrollment and Termination Report."
- b) Complete the application (VE-4671 - Application for Nontraditional Incentive Program). This application commits the applicant to conducting activities and expenditures according to the guidelines.
- c) Submit the completed application by April 30.

2. June/July

- a) The State Board of Education receives recommendation for approving recipients of funds for "Vocational Education Nontraditional Incentive Program."
- b) The fiscal agency(ies) submit the VE-4301 - "Secondary Unduplicated Enrollment and Termination Report" as instructed. It includes the actual count of the nontraditional completers by CIP Code.

3. August/September

- a) After review of the VE-4301 to confirm the number of nontraditional completers, V-TES notifies the applicants of the grant amount. Approval consists of a letter signed by the Superintendent of Public Instruction.
- b) Activities begin upon the receipt of the grant letter.

4. June 30 - The year's activities are to be completed.

5. August 30 - The final activity, impact, and expenditure reports are due. The activities and expenditures are reviewed to assure that they were completed within the guidelines. Unapproved expenditures or activities result in recaptured funds.

C) Implementation

- 1. Approved Activities. The activities conducted in the program must be efforts to promote successful experiences for nontraditional students. These activities may be recruitment or support for nontraditional students to assure retention in that program.

Approved activities include:

- a) Counselor or staff (elementary, middle or secondary) inservice using the ECO model or similar activities.
 - b) Student activities and training in ASETS or other similar activities.
 - c) Development and distribution of promotional materials including portrayal of nontraditional students.
 - d) Non-sexist interest tests for students.
 - e) Student tours or internship experiences focused at least, in part, on nontraditional occupations and training.
 - f) A nontraditional career fair.
 - g) Nontraditional role models for the classroom or at school events, such as assemblies, college night, open house, etc.
 - h) A sex equity action committee.
 - i) Support groups for nontraditional students.
 - j) Career exploration which includes nontraditional careers.
 - k) Promoting nontraditional opportunities with parents, employers, or community leaders.
 - l) Development and maintenance of a local nontraditional role model bank.
 - m) Purchase and dissemination of sex equity materials.
 - n) Other activities approved by the Special Populations Programs and Services Unit if requested and approved in writing. The approval must occur before implementation.
2. Approved Expenditures. Expenditure of the dollars generated by the nontraditional incentive program must be in support of the approved activities. The incentive dollars cannot be used to purchase equipment, for capital outlay, or for out-of-state travel.

Approved expenditures include:

- a) Salaries and fringe benefits; however, no more than 25% time for program coordination.
 - b) Release time for teachers.
 - c) Supplies and materials.
 - d) Transportation of students.
 - e) Inservices or conferences for project personnel.
 - f) Local travel.
 - g) Printing.
 - h) Consultants or contracted services.
 - i) Telephone.
 - j) Postage.
 - k) Stipends.
 - l) Indirect cost at the restricted rate.
 - m) Other, as approved in writing by the Special Populations Programs and Services Unit prior to expenditure.
3. Local Sex Equity Coordinator. A local vocational education sex equity coordinator must be appointed and his/her role and responsibilities defined. Funds from the program may be used to support a part of this person's expenses.
- D) Funding Policy. All K-12 districts, intermediate school districts and area centers are eligible to apply for monies to support activities promoting successful experiences for nontraditional students in vocational education. The dollars available to each agency are based on the number of nontraditional completers reported for vocational training programs within the agency.

Applications will not be considered for funding without the appointment of a local vocational education sex equity coordinator. This sex equity coordinator must have a role in the planning and conducting of the activities.

III. REPORTING, RECORDKEEPING AND MONITORING

- A) Recordkeeping. The fiscal agent must keep files which include:
1. One copy of the application (VE-4671) with any attachments.
 2. The approval letter.
 3. Copies of requests for and approvals of deviations.
 4. Documentation of activities or events conducted under the project.
 5. Documentation of impact of the activities or events conducted under the project.
 6. Copies of all materials developed or produced in this project.
 7. Copies of all reports made to V-TES (the final report and financial reports).
- B) Reporting. Two final reports are to be submitted concurrently and are required. These reports are due 30 days following liquidation of the final expenditure or no later than 60 days following the ending date of the project.
1. Form VE-4044, "Expenditure Report".
 2. Form VE-4671B, "Final Report for Nontraditional Incentive Program".

IV. OTHER INFORMATION

- A) Assurance of Consistency. A school district, intermediate school district or area center may be assured that the identification of the vocational education program as eligible will not change for a least three (3) years.
- B) Age Restrictions. There are no restrictions on the age or grade to focus efforts. However, it is reasonable to believe that retention efforts would be focused at secondary students actually enrolled as nontraditional students.

- C) Materials. Information regarding sex equity materials may be attained from:

Ms. Gerie Wilson
Michigan State University
133 Erickson Hall
Michigan Vocational Education Resource Center
East Lansing, MI 48824
(517) 353-4397
1-800-292-1606

- D) Technical Assistance to implement or plan any of the activities related to the nontraditional incentive program is available from:

Sex Equity Technical Assistance Team
Wayne County Intermediate School District
P. O. Box 807
Wayne, MI 48184
(313) 467-1427
(313) 467-1380
(313) 467-1394

- E) Applications and Technical Assistance:

Sherry L. Anderson, Sex Equity Coordinator
Special Populations Programs and Services Unit
Vocational-Technical Education Service
Michigan Department of Education
P. O. Box 30009
Lansing, MI 48909
(517) 373-3388

CRIMINAL OFFENDERS

I. PURPOSE

Title II, Part A of the Act provides for the delivery of vocational education and related services to criminal offenders who are serving in a correctional institution and deemed to be criminal offenders.

II. DEFINITIONS

"Criminal offender" means any individual who is charged with or convicted of any criminal offense including a youth offender or a juvenile offender.

"Correctional institution" means any 1)prison, 2)jail, 3)reformatory, 4)work farm, 5)detention center, 6)halfway house, community-based rehabilitation center, or any other similar institution designed for the confinement or rehabilitation of criminal offenders.

Such services may be provided in the facilities of the local educational agency, the correctional institution or any other site that is deemed appropriate.

III. COMPONENTS

Any of the following program components may be reimbursed up to a rate not to exceed 100%:

1. Assessment of the interest abilities and special needs of the student with respect to completing successfully the vocational program.
2. Special services including adaptation of curriculum, specialized counseling and career development activities.
3. Counseling services designed to facilitate the transitions to employment and career opportunities.
4. Independent living skills.
5. Related reading and mathematics.
6. Vocational education and other related services that are deemed essential for the success of the student.

IV. APPLICATION PROCEDURES

Complete application form VE-4166 (Secondary) CO entitled Application for Secondary Vocational Education Programs for Criminal Offenders. The application must be returned to Special Populations, Programs and Services Unit on or before February 15, 1987.

V. FINAL REPORT

The final report, VE-4166-F (Secondary) CO, is due no later than 45 days after the end of the project.

TAB IV

Vocational Guidance

CAREER/VOCATIONAL GUIDANCE

Historically, career guidance and counseling and vocational guidance have been regarded as ancillary services which consist of distinct activities and outcomes. Recently, however national, state and local practitioners have accepted career guidance as a broader term which encompasses vocational guidance. Moreover, career guidance is regarded as a program which makes use of a variety of delivery strategies to achieve measurable student outcomes. Given this direction, career guidance is an integral part of the overall educational program.

Definition

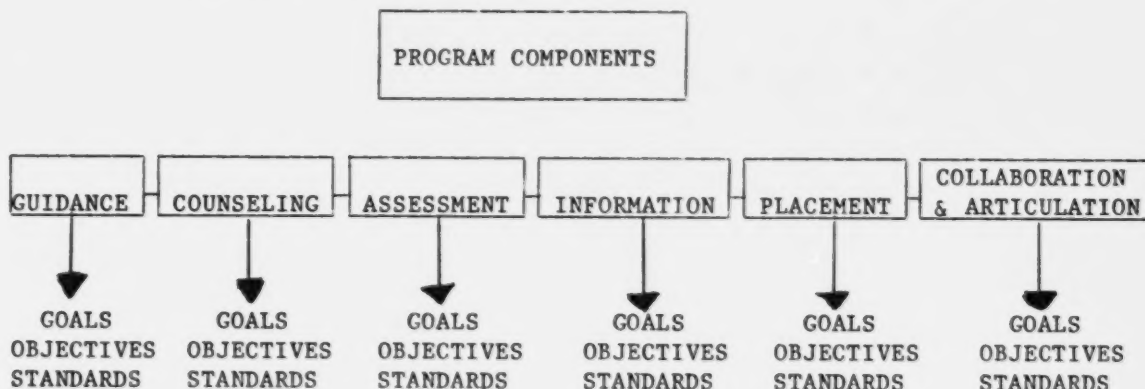
The career guidance program refers to a developmental component of the comprehensive guidance and counseling delivery system which incorporates activities and services that assist youth and adults to develop and implement individual career plans. In order to fully accomplish these goals, the career guidance program must include provisions for articulation of the elementary, middle school and postsecondary programs. In addition, the school-based program should make use of collaborative agreements with public and community based guidance and counseling programs to expand and enhance the services available through school resources. The career guidance program consists of structured developmental experiences presented through classroom, group and individual activities. The curriculum is organized around career planning and exploration, knowledge of self and others, educational and vocational development.

Program Elements

The secondary career guidance program should include provisions for:

1. Self awareness opportunities, interest and aptitude assessment as well as a structured process for interpretation to students and parents/guardians.
2. Career awareness and exploration experiences.
3. Opportunities for formalized career decision-making through an established educational/employability planning process.
4. Structured employability skills training.
5. An opportunity to develop positive work habits, attitudes and values.

6. Formalized transitional activities which assist students to develop the needed competencies to function in new educational, work and life environments.
7. Organized group counseling related to career development.
8. Structured activities which enable students to identify and understand transferrable skills.
9. A coordinated system for the delivery of career and occupational information.
10. Information about educational and training alternatives for achieving career goals.



Funding

- A) The Michigan Department of Education, Vocational-Technical Education Services supports local programs through the provision of technical assistance upon request and the funding of statewide activities which develop and disseminate the materials and practices.
- B) Direct grants to educational agencies for the improvement and/or expansion of local career guidance programs are made available through proposals or applications written in response to requests for proposals or applications.
- C) Further information relative to the application procedure may be obtained from:

Michigan Department of Education
Vocational-Technical Education Service
P.O. Box 30009
Lansing, Michigan 48909

Personnel Requirements

Local schools operating reimbursed vocational education programs shall cooperate with state staff in developing and maintaining adequate vocational guidance and counseling programs for vocational students and potential vocational education students.¹

Secondary counselors shall meet the State of Michigan endorsement requirements. There is currently no specialized endorsement for career or vocational counselors. Individual practitioners may wish to acquire national credentialing for career counselors (NCCC). It should be noted, however, that such credentials will not meet the State Counselor Endorsement requirement. More information relative to the national credentialing procedure may be secured from the Michigan Career Development Association or any of the institutions of higher education that has a counselor education program.

Resource Materials

A general collection of materials to career guidance is maintained by the Michigan Vocational Education Resource Center. The center has materials which may be purchased or they may be secured on a loan basis. The center is located at:

133 Erickson Hall
Michigan State University
East Lansing, Michigan 48824
Phone: (517) 353-4397 or toll free
in Michigan: 1-800-292-1606

¹ State of Michigan General School Laws, "Reimbursed Programs of Vocational-Technical Education - Part 3, Ancillary Services and Activities", R 395.251(a).

MICHIGAN OCCUPATIONAL INFORMATION SYSTEM

I. DEFINITION

The Michigan Occupational Information System (MOIS) is a cooperative program of the Michigan Department of Education, the Michigan Department of Labor, and the Michigan Employment Security Commission. The MOIS program provides occupational and educational information via microfiche and computer delivery versions.

II. OBJECTIVES

The goal of the MOIS program is to help people choose careers by providing them with current, accurate and locally relevant occupational and related educational information.

Specific objectives are as follows:

- A) To help students learn about and understand the range of career opportunities presently available and likely to be available in the future.
- B) To help entrants into the labor force become aware of occupations which they would find acceptable and personally satisfying.
- C) To encourage persons in the process of career exploration decision making to seek out additional vocational information on their own.
- D) To provide support for related programs, including vocational education, career employment counseling, and manpower and educational planning.
- E) To provide all interested educational and public agencies with access to the MOIS microfiche or computer delivery versions and to inservice training on the use of MOIS.
- F) To provide specific information on secondary and adult vocational education program offerings.

III. PROGRAM REQUIREMENTS

MOIS is available without charge to all public agencies and private educational agencies in Michigan. MOIS supplies both the microfiche and computer versions along with support materials and inservice training. Such costs as computer time, equipment, and personnel are local agency responsibilities.

VOCATIONAL EDUCATION JOB PLACEMENT

Definition and Program Focus

The Job Placement Program refers to a formal series of activities and services provided by an educational agency to facilitate the transition from education to employment. The activities and services focus on the development or reinforcement of the skills needed to gain or retain employment. A school-based job placement program relies heavily upon the instructional and guidance program to provide essential services.

Most successful comprehensive job placement programs increase employment opportunities through cooperative programming with other public sector placement services such as the Michigan Employment Security Commission.

The outcome of a successful job placement program is increased full time, part-time, permanent or temporary employment which takes into account the individual's career goals, interests, abilities and is related to the training received. Job placement may be available during the educational process to students enrolled in vocational programs. However, minimally, job placement services should be available to students who have completed or who have graduated from vocational education programs. As financial resources allow, the educational agency may also serve people who have not enrolled in vocational programs or who have not graduated. The degree to which these populations are served is also dependent upon their existence within the population and philosophy of the educational agency.

Program Components

The secondary school-based job placement program consists of three major components:

- A) Pre-Employment Services - are those activities and services which prepare the client/applicant for the job search process and which improve the potential for gaining and retaining employment, including reinforcement of employability skills training.
- B) Referral and Placement - are ongoing and operational activities and services which result in the referral to job openings and employment of clients/applicants. As such, the activities and services are not all limited to direct client/applicant services.

- C) Services to Employers - is that program component which includes activities and services to employers that promote the coordinated job placement delivery system and which are designed to increase utilization of the system. This program component includes such activities and services as employer seminars, screening of applicants, recommendations to educational agencies relative to curriculum changes to improve the job readiness of applicants, special campaigns to identify applicants for hard to fill positions and involvement in the economic development process.

Goals and Objectives for Coordinated Job Placement

I. ADMINISTRATION/ORGANIZATION

Goal - Goals and objectives, an organizational structure, and a planning system will be established for the job placement system.

Objectives

- A) Goals and objectives for job placement will be approved/adopted.
- B) An organizational plan and job descriptions will specify roles and responsibilities for job placement personnel.
- C) The job placement system will be consistent with the written long range plan.

II. PERSONNEL

Goal - Qualified personnel will be employed to provide services and administer job placement programs.

Objectives

- A) Personnel will have written job descriptions.
- B) Personnel will participate in professional development activities.
- C) Personnel will communicate formally and informally to facilitate the operation of the job placement system.

III. FACILITIES/EQUIPMENT

Goal - The job placement program will have adequate and appropriate facilities, equipment, supplies and materials.

Objectives

- A) The space provided for a variety of activities will conform with the needs and goals of the job placement system.
- B) Equipment, materials, and supplies will meet the needs of the job placement program.
- C) Facilities will be accessible to all eligible applicants/clients.

IV. COMMUNITY INVOLVEMENT

Goal - Representatives of the community will cooperate to improve delivery of job placement.

Objectives

- A) An advisory committee, composed of appropriate representatives with defined responsibilities, will provide advice to the job placement system.
- B) A communication system will be maintained to effectively utilize community resources and to promote the job placement program.

V. SUPPORT SERVICES

Goal - Career guidance and other support services/options will be provided to complement the job placement program.

Objectives

- A) Guidance services will be provided to eligible job placement applicants/clients to maximize their potential for success in obtaining and retaining employment.
- B) Vocational/Occupational Program information will be communicated to the job placement personnel.
- C) The necessary support services will be provided and are coordinated to eliminate duplication.

VI. POPULATION/ACCESS

Goal - The eligible population will be provided access to job placement services that result in employment.

Objectives

- A) The job placement program will register and place eligible applicants/clients in proportions that reflect the population in the service area.
- B) The job placement program places an acceptable percentage of vocational/occupational program completers in related employment.

VII. PROGRAM OPERATION

Goal - The job placement program will have service area-wide operational policies and procedures which assure year-round services and assist clients/applicants to obtain employment in accordance with career goals.

Objectives

- A) Service area-wide activities will be implemented to facilitate job placement.
- B) The job placement system will provide supplementary pre-employment services, referral and employment services, services to employers, and post-employment services on a year-round basis.

VIII. COORDINATION AND COLLABORATION

Goal - The education agency's long-range plan for job placement will include the coordinated delivery of job placement services and activities in collaboration with other agencies and organizations providing similar services.

Objectives

- A) Written agreements with other job placement agencies and organizations will document decisions to work together to provide job placement services.
- B) The provisions of the coordination/collaboration agreement or contract will have been communicated to the administration and staff of the participating agencies, organizations and employers.

IX. FINANCE

Goal - A financial management system will be established for job placement.

Objectives

- A) A fiscal and operational plan that will incorporate funding from multiple sources will be implemented for the job placement program.
- B) An effective budget, spending plan and accounting system will have been developed for the job placement program.

Program Evaluation

Recommended job placement program evaluation materials and procedural information are available through the Michigan Department of Education, Vocational-Technical Education Service, Vocational Guidance Unit.

Finance

Federal Funds. Program operational funds for the delivery of coordinated school-based job placement are available and may be requested on an annual basis. Secondary educational agencies should use form #VE 4678 - The Consolidated Application for Vocational Education Grants for Career Guidance and Job Placement Programs.

Funds available through this category are required to meet an established local match. Additional information may be secured from the Michigan Department of Education, Vocational-Technical Education Service, Vocational Guidance Unit, P. O. Box 30009, Lansing, Michigan 48909.

Added Cost Funding

Fiscal agents that conduct state approved vocational education programs may request reimbursement for some job placement program expenditures. Specifics related to allowable expenditures and reporting procedures may be obtained by contacting the Planning, Evaluation and Finance Unit of the Vocational-Technical Education Service.

Resource Materials

A general collection of materials related to job placement is maintained by the Michigan Vocational Education Resource Center. The center has materials which may be purchased and also loan materials. The center is located at:

133 Erickson Hall
Michigan State University
East Lansing, Michigan 48824
Phone: (517) 353-4397 or toll free
in Michigan: 1-800-292-1606

TAB V

Planning, Evaluation, and Finance

VOCATIONAL-TECHNICAL ADMINISTRATIVE POSITIONS

I. BACKGROUND INFORMATION

The challenges facing vocational education during the 1980's and 1990's demand the availability of highly qualified vocational administrators in meeting the needs of youth, adults, business, industry, and labor in Michigan. Knowledgeable administrators must have strong leadership skills and a commitment to serving the vocational education needs of high school students as well as adults. Coordination and collaboration among educational agencies to share students and resources are essential as vocational education moves toward the end of the century.

The Job Training Partnership Act, economic development, adult education, special education, and other programs offer educational opportunities for citizens in every community in cooperation with public secondary and postsecondary education agencies. These opportunities will be realized only if educators plan and work together, demonstrating that vocational-technical education has the ability to deliver the services. These efforts must also include business, industry, and labor to reflect their changing needs for trained personnel.

II. TITLES

The following titles apply to vocational-technical administrators:

- Directors of Vocational Education
- Shared-Time Directors of Vocational Education
- Career Education Planning District (CEPD) Vocational-Technical Specialists
- Area Program Implementors.

III. QUALIFICATIONS

A) Education

Secondary vocational administrators shall be graduates of an approved and accredited college or university with at least a Master's Degree and shall have completed vocational education preparation in the administration, supervision, and organization of vocational education programs.

B) Experience

Secondary vocational administrators shall have had a minimum of three years of experience in administration and/or teaching in vocational education programs.

C) Other Conditions

If a candidate does not meet the above referenced qualifications, an evaluation of competency will be made by the Michigan Department of Education based upon the combined education and experience of the individual.

IV. CRITERIA FOR APPROVING THE POSITION OF LOCAL DIRECTORS OR SHARED-TIME DIRECTORS OF VOCATIONAL EDUCATION

Approval of a full-time administrator of vocational education is dependent upon the number of vocational students enrolled in approved programs of the fiscal agent. A minimum number of 700 students enrolled on an unduplicated count basis is required to qualify for this position. Districts employing a full-time vocational administrator but which are unable to meet the 700 minimum enrollment requirement will be eligible to receive reimbursement on a pro-rated basis depending upon the actual number of students. In using the unduplicated enrollment as the basis for determining local administration approvals, it is necessary to consider other relevant factors that give additional weights to the unduplicated student counts. These factors include:

- A) Administrators of local districts must coordinate activities related to non-wage earning consumer and homemaker education.
- B) Administrators of local districts must coordinate activities involved in sending students to area centers.
- C) Administrators who have shared-time or area vocational consortium programming deal with more than one set of school district policies and procedures.
- D) Administrators who have direct responsibility for adult vocational education retraining and/or economic development activities.

Accordingly, these factors have been included in the formula for determining total unduplicated student enrollments. The number of unduplicated students by district, after applying the above factors, may be obtained by contacting Vocational-Technical Education Service (telephone 517/373-0600).

V. FACTORS FOR APPROVING THE POSITION OF CAREER EDUCATION PLANNING DISTRICT (CEPD) SPECIALIST

Approval of a full-time CEPD Specialist is dependent upon a number of factors which are prevalent in the CEPD at the time of application. In larger CEPD's a full time position can be justified on the basis of job functions in the areas of leadership, technical assistance,

planning, coordination, inservice, data management, etc. In smaller CEPD's where fewer programs are available, it may be necessary for the CEPD Specialist to serve in a dual position of CEPD specialist and shared-time director of vocational education to justify intermediate school district and Vocational-Technical Education Service approval of a full-time position. In addition, this may be the only avenue for some Local Educational Agencies (LEA) to access vocational administration leadership. Vocational- Technical Education Service staff are available to provide technical assistance in developing a full-time position description.

VI. ROLE OF VOCATIONAL DIRECTORS

A) Program Review/Planning & Development

1. Assure that the district's vocational delivery system is based upon goals and objectives in accordance with State guidelines and approved by the local Board of Education.
2. Provide leadership for conducting program review of the district's delivery system for vocational education at least once every three years.
3. Develop, update, and annually prepare with the CEPD, a plan for providing secondary vocational education in the district.
4. Provide leadership and direction for meeting program evaluation and improvement, including the implementation of student occupational competency assessment.

B) Program Management

1. Assure that vocationally certified or approved personnel are employed in all positions requiring such qualifications.
2. Provide technical assistance to district administration and staff to meet State and federal guidelines and requirements for approved vocational education programs.
3. Facilitate and/or coordinate the acquisition of appropriate instructional equipment, supplies, and materials for all vocational education programs in the district.
4. Facilitate efforts to locate programs in facilities which are safe and are operated with equipment which meets local, State and federal guidelines.
5. Prepare and administer the district's budget for vocational education programs.

6. Be accountable for data collection, form completion, and submission to the CEPD and Vocational-Technical Education Service (V-TES) within prescribed timelines.
7. Be accountable, along with other district administrators, for vocational education record maintenance and accuracy.
8. Be responsible for conducting the district's annual follow-up and assist in meeting the State's goals of obtaining 80% response of program completers.
9. Encourage provision of job placement services for vocational education students.
10. Provide leadership and technical assistance to staff regarding use of materials and programs that achieve sex equity, help eliminate sex bias, sex discrimination, and sex stereotyping, and promote nontraditional enrollments.
11. Promote and actively encourage involvement in vocational student organizations.
12. Insure that the vocational curriculum is representative of labor market needs.
13. Provide leadership and technical assistance to develop and maintain vocational programs for special populations, including race/ethnic minorities and handicappers.
14. Provide leadership for, and assure that, occupational advisory committees are established and utilized in planning, reviewing, and promoting each vocational program offered.
15. Provide leadership in vocational guidance, including the Michigan Occupational Information System (MOIS).

C) Professional Development

1. Be responsible for promoting and/or providing vocational education inservice activities for personnel in the district.
2. Participate in V-TES called meetings and conferences.

D) Collaboration & Coordination

1. Participate in CEPD-level planning and coordinating meetings and activities to maximize cooperation among and between

agencies offering vocational education and/or employment and training programs to meet local application requirements of the Carl Perkins Act.

2. Encourage program coordination and articulation with post-secondary agencies.
3. Participate in efforts to bring about closer business/industry/labor/education/government cooperation and work with community economic development activities.
4. Participate in marketing vocational education activities with other agencies in the CEPD.
5. Encourage program coordination and articulation between local educational agencies and area vocational programming.
6. Develop and initiate activities necessary to bring about closer cooperation with vocational education and general/academic education.

E) Program Marketing

1. Plan and lead marketing activities within the district to create increased understanding and awareness in the service area of vocational education programs, needs, and successes.

VII. ROLE OF CEPD SPECIALISTS

A) Leadership & Technical Assistance

1. Provide technical assistance, leadership, and coordination for planning activities in the CEPD.
2. Initiate, facilitate, and help to implement an interagency approach to providing vocational education for persons with special needs.
3. Provide administrative assistance for those districts lacking vocational directors.
4. Provide technical assistance for LEA's operating or desiring to operate vocational education programs, including Consumer Home Economics and Marketing Vocational Education activities among vocational educators, business, industry, labor, students, and other appropriate audiences.

B) Coordination

1. Initiate and develop activities necessary to bring about closer business/industry/education cooperation, including "Partnerships for Education," and work with community economic development activities.
2. Initiate activities necessary for the coordination and articulation of programs and services between and among secondary and postsecondary institutions to train adults, as well as youth.
3. Promote and coordinate sex equity activities which result in the enrollment of students in vocational programs that are non-traditional for their sex.
4. Initiate and develop activities necessary to bring about closer cooperation with vocational education and general/academic education.

C) Planning & Evaluation

1. Provide leadership and/or support for area program development activities.
2. Provide leadership for CEPD Council or Vocational Education Planning Committee.
3. Serve as liaison person between the CEPD and V-TES on matters relating to planning and evaluation.
4. Provide assistance to local educational agencies in meeting evaluation requirements under the Carl Perkins Act.

D) Job Placement

Assure a leadership role in the design and implementation of a job placement delivery system for vocational graduates coordinated with the placement services of Michigan Employment Security Commission, Vocational Rehabilitation, Special Education, Department of Social Services, and the business/industry community.

E) Inservice

1. Coordinate inservice activities for vocational personnel and appropriate school administrators.

2. Make arrangements for Office for Civil Rights regional inservice to LEA's in preparing for on-site reviews and in meeting other compliance obligations in the absence of a vocational director.
3. Identify MOIS inservice training needs and schedule training sessions with cooperation of the MOIS State staff.
4. Participate in State-called inservice meetings.

F) Data Management

1. Serve as the primary link for coordinating data collection and student follow-up reports with the Vocational-Technical Education Service.
2. Coordinate distribution of V-TES forms to local educational agencies.
3. Provide technical assistance and facilitate LEA reporting procedures so that forms and reports can be returned correctly and on time to V-TES.
4. Coordinate the distribution of MOIS materials to LEA's.

VIII. ROLE OF AREA PROGRAM IMPLEMENTOR

A) Planning A Secondary Area Program

1. Review, evaluate, and update existing area vocational education studies.
2. Form advisory committees to assist in the planning process.
3. Develop plans for financing, locating, and operating needed secondary area programs.

B) Development

1. Coordinate election activities to secure necessary financing and legal authority.
2. Coordinate curriculum and facility development.
3. Prepare appropriate applications for area program/center.
4. Prepare recommendations regarding the necessary vocational administrative leadership to continue the development and

operation of the area program. (The position of Area Program Implementor should be phased out and operations continued by a Vocational Director. The Implementor position will be funded for a maximum of three years.)

IX. REIMBURSEMENT OF LOCAL VOCATIONAL ADMINISTRATORS

A) Eligible Reimbursement

Approved vocational-technical specialists and vocational directors will be funded based on 40 percent of a maximum salary of \$35,000. Reimbursement, therefore, is limited to a maximum of \$14,000. Reimbursement will come from State Aid Added Cost Funds (Section 61.2) for vocational administration and/or federal matching funds.

B) Eligible Agencies Reporting Vocational Administrative Costs

Only school districts with approved and/or qualified administrators will be eligible to report expenditures on the Expenditure/Revenue Report. No added cost funds allocated from Section 61.1 will be eligible for reimbursing vocational administrative costs.

C) Travel Reimbursement

1. Travel reimbursement applies for authorized travel (transportation only) for the maintenance or promotion of vocational education programs in local service areas.
2. CEPD Specialists are eligible for local travel reimbursement. In addition, they may also be approved for authorized travel (transportation, meals, and lodging) to conferences or meetings called by the State Director of Vocational Education.
3. Local educational agencies must maintain records of sums paid for travel in sufficient detail for auditing purposes.

X. APPLICATION PROCEDURES

Applications for full-time vocational education administrative positions are approved annually. Form VE-4003 may be obtained by writing the Michigan Department of Education, Vocational-Technical Education Service, Post Office Box 30009, Lansing, MI 48909, (517) 373-0600.

THE CEPD ANNUAL PLAN

I. Definition

The CEPD (Career Education Planning District) Annual Plan is the product of a local decision making process oriented toward the continuing need to update and improve the vocational offerings available to students in a given CEPD. It serves as the annual application as required in Section 115 of Public Law 98-524, the Carl D. Perkins Vocational Education Act of 1984.

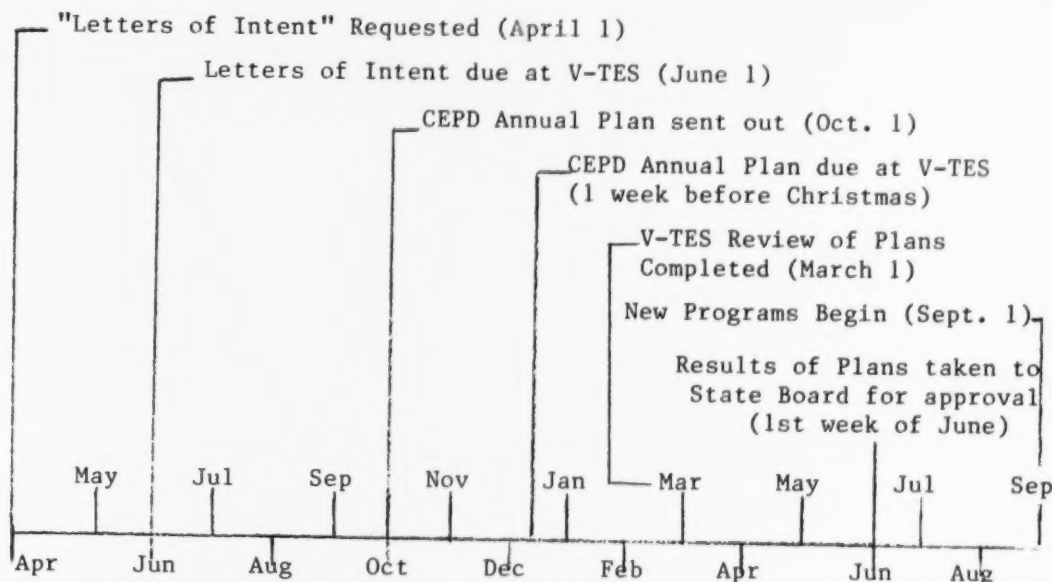
II. Objectives

In addition to the purposes set forth in the Public Law, the following are objectives of the CEPD Annual Planning process:

- A. To encourage local school districts to develop a vocational delivery system which addresses the needs of the entire CEPD.
- B. To stimulate active participation by all local school districts in the development of the plan.
- C. To combine the planning efforts of persons responsible for various vocational components, thereby, increasing communication and cooperation.
- D. To encourage local school districts to use pertinent data and resources in developing their plan for delivering vocational education.
- E. To relieve local school districts from some of their reporting burden by limiting the collection of information to only those items needed by V-TES for decision making.
- F. To provide a mechanism through which V-TES can work with CEPDs to promote its vocational goals.
- G. To stimulate local school districts to focus on future direction and better plan their implementation strategies.

III. Timelines

The timelines for the CEPD Annual Planning Process have been established to accommodate the needs of the local school districts and to allow for the input of the plans to impact the budget process at V-TES. The basic timeline used is shown below:



As can be seen by this illustration, the planning process has no specific beginning or ending point but is viewed as a continuous process of evaluating current needs and adjusting programming to serve those needs. Some new programs require considerably more time to plan and organize. This is especially true in developing new "cluster" programs. Irrespective of the above timelines, education agencies are encouraged to contact the appropriate V-TES consultant as soon as consideration is given to developing a cluster program.

IV. Coordination

Coordination of the CEPD Annual Plan is the responsibility of the CEPD Vocational-Technical Specialist. They are responsible for assembling a planning committee with representatives of affected local schools to decide on the content of the Annual Plan. Planning meetings should be convened as necessary, however, it is recommended that the committee meet approximately three times a year.

The recommended dates for those three meetings are:

- (1) Prior to the submission of the letter of intent.
- (2) Shortly after the CEPD Annual Planning forms are mailed to the CEPDs.
- (3) Prior to submission of the CEPD Annual Plan.

V. Content of the Plan

Currently the following applications are all components of the CEPD Annual Planning Process. It is expected that other vocational planning components may become integral parts of the plan in the future.

- A. Ongoing Programs
- B. Program Improvement - Equipment
- C. New Programs
- D. Special Needs Projects

VI. References

All questions relating to the Annual Planning Process should be directed to:

Jim Rudnick
Occupational Specialist
Michigan Department of Education
P.O. Box 30009
Lansing, Michigan 48909
(517) 373-6731

VOCATIONAL EDUCATION DATA SYSTEM

I. LEGISLATIVE MANDATE FOR DATA

State law requires local school districts to report information about their vocational education instructional programs if they are to receive reimbursement for conducting the programs. In the amount and kind of information required, the Department of Education has reduced the reporting burden on the districts.

II. DATA COLLECTION SYSTEMS

Many local districts have achieved additional reduction of burden by computerizing much of their data operation--some using in-house main frame computers, others purchasing main frame computer services, and still others using microcomputers with their own or department-provided software.

Types of data needed by the Department are:

- A. Information about students
- B. Information about programs
- C. Information about costs
- D. Information about facilities/sites
- E. Information about student follow-up
- F. Information about teachers/administrators

Increasingly, the Department has a commitment to provide up-to-date microcomputer software for local schools, area centers and intermediate school districts to meet many of the data requirements. For technical assistance, contact Jim Bebermeyer, Research Consultant, Planning, Evaluation and Finance Unit at (517) 373-6731.

III. REPORTING TIMELINES

The "Time Frames for Reporting Secondary Vocational Education Data for FY 1986-87" follows.

MICHIGAN DEPARTMENT OF EDUCATION
VOCATIONAL-TECHNICAL EDUCATION SERVICE

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Time Frames for Reporting
Secondary Vocational Education Data for FY 1986-87

<u>Form Number</u>	<u>Form Title</u>	<u>Reporting Activities</u>	<u>Staff Responsible</u>	<u>VTES Mail-out to LEA/CEPD</u>	<u>Date Due From LEA to CEPD</u>	<u>Date Due From LEA/CEPD to VTES</u>
VE-4001 (A - D)	CEPD Annual Plan for Secondary Vocational programs	CEPD projections for next year's enrollment; special needs application; new and program improvement applications	J. Rudnick	10-1-86		12-19-86
VE-4003	Application for Full-Time Vocational Administrator	Application for Administration	W. Rude	6-20-86	7-28-86	8-4-86
VE-4009	Application for Secondary Area Vocational Education Area Center Designation	Apply for area center designation	R. Pangman	Available Upon Request		
VE-4033 (A & B)	LEA/Area Vocational Technical Education Fund Expenditures	Expenditure report of added costs	J. Howard	6-87	9-1-87	9-15-87
VE-4045 (A & D)	Follow-up Survey of Students (Vocational and Nonvocational)	Report of follow-up on vocational and nonvocational students	J. Bebermeyer	2-20-87* (From IDEA)	4-21-87*	5-15-87 * (To IDEA)
VE-4050	Application for Area Vocational-Technical Construction Grant	Application for area construction	R. Pangman	Available Upon Request		
VE-4057-A	Certification of Encumbrance of Funds for Equipment	Certification of funds	L. Schueller	7-86		10-15-86
VE-4058-A	Reimbursement Request for Approved Equipment	Reimbursing LEA's for equipment	L. Schueller	10-15-86		3-31-87

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*May be earlier

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<u>Form Number</u>	<u>Form Title</u>	<u>Reporting Activities</u>	<u>Staff Responsible</u>	<u>VTES Mail-out to LEA/CEPD</u>	<u>Date Due From LEA to CEPD</u>	<u>Date Due From LEA/CEPD to VTES</u>
VE-4118	Application for Reimbursement of Vocational Administration Salary and Travel	Application for reimbursement of administrative salaries and travel expenses	L. Schueller	5-87		6-87
VD-4166-C	Final Report for Secondary Vocational Education Projects for Persons with Special Needs	Final special needs project enrollment; completer/leaver data; expenditures	J. Switzer	5-15-87	8-14-87	8-14-87
VE-4166-C.O.	Application for Secondary Vocational Education Projects for Criminal Offenders	Application for grant	R. Kennon	2-13-87	3-13-87	4-10-87
VE-4250	Application for Chapter Affiliation in Michigan Association of FFA	FFA dues	C. Arensmeier	9-1-86		10-86
VE-4284	Vocational Education Equipment Inventory	Vocational education equipment inventory	L. Schueller	2-87		4-10-87
VE-4301	Secondary Vocational Enrollment & Termination Report	Unduplicated secondary vocational education enrollments	C. Kiefer	5-15-87	7-1-87	7-15-87
VE-4370	Reimbursement of FFA expenses	Reimbursement of expenses	C. Arensmeier	9-86		7-1-87
VE-4483 (A,B,E)	Fall Data Collection Package	Validation of beginning and ending enrollments for added cost and special needs funding	M. Seney	9-1-86	10-10-86	10-21-86
VE-4483-D	Program/Course/Section Data Verification and Enrollment Report (Spring)		M. Seney	12-17-86	3-6-87	3-13-87

<u>Form Number</u>	<u>Form Title</u>	<u>Reporting Activities</u>	<u>Staff Responsible</u>	<u>VTES Mail-out to LEA/CEPD</u>	<u>Date Due From LEA to CEPD</u>	<u>Date Due From LEA/CEPD to VTES</u>
VE-4527	Certification of Eye Protective Devices & Informed Instructors	Eye protection certification	M. France	8-15-86	9-10-86	10-3-86 (If not Certified)
VE-4648	Application for Vocational Education Programs for Single Parents & Homemakers	Application for grant	S. Anderson	4-1-86	5-1-86	5-15-86
VE-4648-A	Interim Report for Single Parent & Homemaker Projects	Progress report for project	S. Anderson	1-87		2-27-87
VE-4648-B	Final Report for Single Parent & Homemaker Projects	Summary of project activities	S. Anderson	5-87		8-31-87
VE-4660	MOIS User Site/ Materials Summary and Contact Person Update	Determine the amount of materials necessary to order for MOIS	J. McGarvey	4-87		5-87
VE-4671	Application for Sex Equity Activities	Application for incentive monies	S. Anderson	4-1-86	5-15-86	8-29-86
VE-4678	Consolidated Application for Vocational Education Grants - Career Guidance and Job Placement	Application for grants	G. Bonaparte	4-17-87		5-15-87
VE-4678-A	Vocational Education School-Based Area Job Placement Network Project Report	Deleted - now incorporated in VE-4678				
250 VE-4679	Application for Vocational Education Economic Development Job Training Funds	Application for federal funds to fund training program	D. Grow	Available Upon Request		

<u>Form Number</u>	<u>Form Title</u>	<u>Reporting Activities</u>	<u>Staff Responsible</u>	<u>VTES Mail-out to LEA/CEPD</u>	<u>Date Due From LEA to CEPD</u>	<u>Date Due From LEA/CEPD to VTES</u>
VE-4679-A	Final Report: Vocational Technical Education Economic Development Job Training	Final project results/ expenditures	D. Grow	14 days before project close		30 days after project termination
VE-4734	Grant Details for Vocational Education Coordinated Job Placement Delivery System Status Study/ Planning Grants	Deleted - now incorporated in VE-4678				
VE-4671-B	Final Report for Sex Equity Activities	Summary of project activities	S. Anderson	5-87		8-31-87
VE-4648-C	Application for CBO/LEA Collaborative Efforts for Vocational Education Services	Application for grant	S. Anderson	5-21-86	6-26-86	7-2-86
VE-4648-D	Interim Report CBO/ LEA Collaborative Efforts	Progress report for project	S. Anderson	1-87	2-27-87	2-27-87
VE-4648-E	Final Report CBO/ LEA Collaborative Efforts	Summary of project activities	S. Anderson	5-87	8-31-87	8-31-87

EVALUATION AND PROGRAM REVIEW/PLANNING

Evaluation

The Carl D. Perkins Vocational Education Act of 1984, P.L. 98-524, emphasizes the need for vocational program improvement and requires a program evaluation of at least 20 percent of the local educational agencies each year over a five year period. Vocational education should be evaluated on both a process and product basis. Process evaluation, done through Program Review/Planning, was approved by the State Board on December 11, 1984. Process evaluation generally looks at how local vocational education is delivered. Product evaluation examines the outcomes of vocational effort. The objectives are to maximize vocational: 1) enrollment, 2) student occupational competence, and 3) student placement.

The combination of process and product evaluation provides a linkage between program delivery, evaluation, and planning, while offering a context for total program improvement. Results of the program evaluation will be directly tied to a five-year planning cycle, through which incentive funds will be provided in order to improve vocational enrollment, occupational competence, and/or placement.

Student Occupational Competency Assessment (See Attachment A) describes, in more detail, the purposes of occupational competency assessment. In order to completely develop the evaluation model, a vehicle for occupational assessment has been developed that includes both written (multiple-choice) and performance test items. A computerized test bank will eventually hold test items for all vocational programs, with test items tied to curriculum tasks. This capability will allow any local agency to receive a written and/or performance test encompassing only the curriculum taught in its vocational program.

The vocational evaluation model encourages local education agencies to serve more vocational students, to have those students learn more while enrolled, and to place more of those students in related jobs or continuing education after program completion.

Program Review/Planning

I. INTRODUCTION

Secondary vocational education program review provides a step-by-step process through which educators at the local level may plan and conduct a program review, identify and prioritize needs, and implement a written action plan to improve vocational education. The process is based upon vocational education goals and objectives which measure the status of seven components of a vocational education program/delivery system: finance and administration, population/access, community involvement, personnel, student services, facilities and equipment, and instructional program.

The steps in the process are presented in Part I of the Secondary Vocational Education Program Review/Planning Handbook. The Handbook also contains a recommended activity plan, sampling suggestions and procedures, information regarding the use of external teams, and formats for the presentation of findings and conclusions.

II. THE PROGRAM REVIEW INSTRUMENT

A program review instrument which is coordinated with the vocational education goals and objectives presented in Part I of the Handbook is available in quantity and free of charge to local education agencies. Data processing services are also available free of charge. The program review instrument is designed to review vocational programs at the "District level" and at the "Program Level". The District Level Review asks questions about those components of the educational delivery system that affect all vocational education programs. The Program Level Review asks questions about those components of the education delivery system that are inherent within each vocational education program.

Questionnaires have been prepared for groups such as the following: placement personnel, vocational administrators, guidance personnel, teachers, advisory committee members, students, cooperative education coordinators, special education personnel and others.

Part II of the Handbook contains information specific to the design, content, and use of the program review instrument.

Vocational administrators should be advised that the Secondary Vocational Education Program Review can take the place of the required advisory committee reviews if advisory committee members participate as respondents. In addition, the North Central Association of Colleges and Schools (NCA) will consider a request, initiated by the administrator(s) of a high school scheduled for an NCA evaluation, to substitute the Secondary Vocational Education Program Review/Planning process and accompanying instrumentation for the self-evaluation process currently used by NCA for vocational programs in Michigan.

III. MATERIALS AND SERVICES

The Michigan Vocational Education Resource Center (MVERC) houses and distributes all Secondary Vocational Education Program Review/Planning materials. Resource Center staff also facilitate the Program Review data processing and technical report writing activities.

The address and telephone numbers of the MVERC are:

133 Erickson Hall
Michigan State University
East Lansing, Michigan 48824

1-800-292-1606

or

(517) 353-4397

Information about the materials and services available for PR/P activities is presented in Part III of the Handbook. Material and service request forms are also included.

ATTACHMENT A

Student Occupational Competency Assessment

Philosophy: Vocational education leads to competence and competence is linked to performance. Vocational education must, at some point, be concerned with the assessment of performance.

The Intentional Outcomes Can Be: (1) Improved student skills, knowledges, and abilities; (2) Improved measuring and accountability processes for occupational instruction; and (3) Improved productivity at the occupational job site. The by-product of performance testing is the focussing on improved human competence. Although performance testing is only one part of the process, it can provide the basis for the planning of the entire vocational instructional process. If the general goal of vocational education is access to employability, the general goal of performance testing can be to provide clearer advisement, clearer feedback and direction in instruction, and more realistic certification of competencies to facilitate access to employability.

The Total Instructional Process: Competency assessment must be part of an instructional process that includes: (1) Clear identification of intended outcomes; (2) Utilization of appropriate materials, strategies, and experiences to facilitate the intended outcomes; and (3) Application of appropriate procedures and instruments to assess and measure the student progress. Once the student has completed this instructional process, the individual, the instructor, and potential employer will have clear information concerning the skills, knowledges, and abilities that have been achieved.

The Testing Purposes: Two questions must be answered: (1) Are test scores sought for individual students or will scores be aggregated across students? (2) What kinds of decisions will be influenced by the test data? Four different testing purposes represent different ways of answering these two questions. These are:

1. Formative program evaluation
2. Summative program evaluation
3. Instructional management and decision making
4. Student certification

The first two purposes entail test score aggregation across individual students, while the latter two call for the collection and interpretation of individual student data. All four purposes affect different kinds of decisions.

1. Formative program evaluation is an integral part of the process of curriculum development and improvement. It points out a program's strengths and weaknesses. The goal is to understand the reasons for a program's success or failure.
2. Summative program evaluation is used to determine the program's overall merit, relative to its competition. The results of summative evaluation are directed toward those who control the decisions about program support and adoption, rather than toward the developers of the program.
3. Competency assessment for the purpose of instructional management and decision making encourages the design of each individual's instruction to promote mastery of the learning task. Instructional management, in this sense, requires the integration of testing and instruction, in which the teacher is provided with precise descriptions of each student's learning as a guide to modifying instruction.
4. Competency assessment for student certification refers to the rewarding of diplomas, documents certifying competency, or advanced placement in a course sequence on the basis of test performance. The rationale is that "seat time" is inadequate as a proxy for student competence and, therefore, more objective evidence of student achievement is necessary. Student certification forms the basis for articulating curriculum between secondary and post-secondary education institutions, which provides advanced placement in related post-secondary programs.

Both formative program evaluation and instructional management require student performance data not just on achievement of terminal objectives, but also on enabling objectives. The intent is to identify points at which the instructional program is faltering, either across all students (formative evaluation) or with respect to an individual student's learning (instructional management).

Summative evaluation and student certification, on the other hand, both call for a product evaluation approach. The interest is in knowing whether students achieved the objectives stated as end-of-course outcomes.

POLICIES AND PROCEDURES FOR FUNDING VOCATIONAL EDUCATION PROGRAMS
THROUGH ADDED COST

A) Background

1. What is the purpose of "added cost"?

Added cost funds are appropriated by the state legislature as categorical state aid [Section 61 (1) of the State School Aid Act] in support of secondary vocational education programs. These funds are allocated to school districts and area centers for the purpose of reimbursing the extra cost of these programs above the cost of nonvocational programs.

2. What is the definition of "added cost"?

The added costs of a vocational program are measured by calculating the difference between the average cost per student hour of the vocational program and the average cost per student hour of the alternative secondary academic or "general" education program. The added cost factor is equal to 75 percent of the differential. Added cost recognizes that most vocational programs cost more than nonvocational programs due to such factors as smaller classes, specialized equipment, supplies, and specialized supportive services (including placement and administration). The reimbursement formula includes the following items: (1) state average added cost for each program, (2) number of students, (3) hours per day that the class meets, and (4) number of weeks the class meets.

3. What is the formula for determining added cost payments?

The added cost factor for each vocational program has been identified. The added cost factor is based on the cost for one student, 60 minutes per day, five days per week, for a full school year. The added cost formula contains variables for the added cost factor, the number of students, the minutes of meeting time per week, and the number of weeks.

$$\begin{array}{rcl}
 \text{AC} & = & \text{ACF} \times \text{S} \times (\text{M} \div 300) \times (\text{W} \div 36) \\
 \text{Added} & & \text{Added} \quad \text{Number} \quad \text{Minutes} \quad \text{Weeks Course} \\
 \text{Cost} & & \text{Cost} \quad \text{of} \quad \text{Course in} \quad \text{in Session} \\
 & & \text{Factor} \quad \text{Students} \quad \text{Session Per} \quad \text{(Quotient computed} \\
 & & & & \text{Week} \quad \text{to two decimals)} \\
 & & & & \text{(Quotient computed} \\
 & & & & \text{to three decimals)}
 \end{array}$$

Example:

An approved auto mechanics class is offered in a certain school. Twenty-one students attend the class for 36 weeks. The class meets for 600 minutes per week. The added cost factor for auto mechanics is \$99. Thus the added cost formula reads:

$$AC = ACF \times S \times (M \div 300) \times (W \div 36)$$

$$AC = \$99 \times 21 \times \frac{600}{300} \times \frac{36}{36}$$

$$AC = \$99 \times 42 = \$4,158$$

4. How are added cost factors updated?

The costs of operating vocational programs are surveyed annually and added cost factors are revised where data indicates a different factor (See Attachment A for added cost factors).

An annual expenditure/revenue report completed by local educational agencies provides for total costs of each vocational education program. These cost data are reported on Form DS-4033, Vocational-Technical Education Fund Expenditures.

B) Priority of Added Cost Fund Allocation

1. Program priority funding will be based on high employment demand, placement, the demand/supply relationship, and provisions for CEPD program options.

a) Sixty percent (60%) of funding will be allocated using state-wide employment demand, state-wide related placement, and the state-wide demand/supply relationship. (See Attachment B and C) This State Rank list will be updated annually as new data become available, and will be made available no later than October 1 of the previous year for which the list will be in effect.

b) The forty percent (40%) CEPD Option will be allocated based on each CEPD's selection of individual programs. CEPD's not choosing to select individual programs will automatically be funded by continuing down the State Ranking List of programs. CEPD's can also choose to fund all cooperative education components under either

2. Local agencies will be allowed to use added cost funds solely for those approved programs generating the funds. The only exception will be to allow the use of added cost funds in approved programs not generating added cost funds in inservice, placement/follow-up, and equipment.
3. Added cost factors for all vocational programs will be prorated or reduced whenever necessary to ensure that at least 15 different vocational programs will be funded with 60% of the added cost dollars used for state-wide employment training needs. Added cost factors will not be reduced below 55% of the added cost.
4. Consumer and homemaking (non-wage-earning) 20.0101 will receive program improvement federal funds.
5. Extended school day and extended school year sections will be treated as regular sections for funding purposes. Extended school year designation is contingent upon the approved program laboratory being utilized a minimum of 80 percent during the regular school year. Extended school day means those sections which start and end before the regular school day or start and end after the regular school day.

Area Skill Centers - First and second shifts of block time instruction in area skill centers constitute regular programming. The third and subsequent shifts are usually considered extended school day sections.

C) Local Match

The State Aid Act limits reimbursement to 75 percent of the added cost. This means that for all added cost reimbursed programs, school districts will need to budget 25 percent of added costs from local sources.

The local match requirement is considered on a district-wide basis, not at the program level, although program budgeting should be reflected in match provisions at the local level.

The local match required expenditure can be determined by the following steps:

1. Multiply the added cost amount received in all sections by 1.33 to get the total state and local contribution to added cost (75 percent and 25 percent amounts).
2. Compute the vocational expenditure necessary to equal the cost of nonvocational instruction by multiplying the total number of student hours in vocational programs reimbursed

with added cost (do not include student hours in non-added-cost-funded programs) by the cost of secondary nonvocational basic education. If your district has a lower cost than the state average nonvocational cost per student hour, that lower amount will be used in this calculation. For area centers, the weighted average nonvocational cost of all local sending districts will be used. For shared-time, the fiscal agent's nonvocational cost will be used.

3. Add "1" and "2" to get the total local match required expenditure.
4. Determine total expenditure amount for all wage-earning vocational programs.

If total expenditure ("4") is greater than total match required ("3"), there is an overmatch. If total match required ("3") is greater than total expenditure ("4"), there is a match deficiency equal to this difference. The maximum match deficiency cannot exceed the total amount of added cost received.

D) Match Requirement Examples

1. Match Deficiency: The following match requirement example is provided for illustrative purposes only. In this example, District X has a nonvocational cost of \$300 per student hour, 1,200 student hours in vocational programs funded with added cost, and received \$150,000 of added cost reimbursement in all vocational programs. Total expenditures in all vocational wage-earning programs is \$550,000. Steps in determining the match follow:
 - a) $\$150,000 \times 1.33 = \$199,500$
 - b) $1,200 \text{ student hours} \times \$300/\text{student hour} = \$360,000$
 - c) $a) + b) = \$559,500 = \text{Total Match Requirement}$
 - d) $\$550,000 = \text{Total Expenditure}$
 - e) $\$559,500 - \$550,000 = \$9,500 \text{ Match Deficiency}$
2. Overmatch: In this example, District Y has a nonvocational cost of \$300 per student hour, 1,200 student hours in vocational programs funded with added cost, and received \$150,000 of added cost reimbursement in all vocational programs. Total expenditures in all vocational wage-earning programs is \$600,000. Steps a), b), and c), would be the same as above. Since Item d), total expenditure, is \$600,000, the overmatch is \$40,500 (\$600,000 - \$559,500).

ATTACHMENT A

Added Cost Factors
For Approved Secondary
Vocational Education Programs
FY 1986-87

The following list, in sequence by program code, contains the added cost factors for all approved secondary vocational education programs. These added cost factors are 75% of state-wide average added costs. With proration, a reduction of these factors to 55% will occur. Such 55% factors are in parenthesis.

<u>CIP Code</u>	<u>Program Name</u>	<u>1986-87 Added Cost Factors</u>
XX.0000	Coop Coordination Technique	\$ 83 (\$60.92)
XX.XXXX	Less-Than-Class-Size Contracts	300 (220.20)
<u>Agriculture</u>		
01.0201	Agriculture Mechanics	382 (280.39)
01.0301	Production Agriculture	206 (151.20)
01.0401	Ag Products and Processing	150 (110.10)
01.0601	Horticulture	305 (223.87)
03.0101	Renewable Natural Resources	264 (193.78)
<u>Business and Office</u>		
07.0101	Accounting & Computing	312 (229.01)
07.0301	Business Data Processing	299 (219.47)
07.0305	Computer Programming	301 (220.93)
07.0601	Secretarial Programs	252 (184.97)
07.9999	Business & Office Cluster	328 (240.75)
<u>Distributive Education</u>		
08.0700	Marketing & Distribution	137 (100.56)
<u>Health</u>		
17.0100	Dental Occupations Cluster	219 (160.75)
17.0200	Diagnostic Services	225 (165.15)

Health (Con't)

17.0300	Laboratory Occupations Cluster	\$339	(\$248.83)
17.0503	Medical Office Cluster	237	(173.96)
17.0507	Pharmacy Assisting	349	(256.17)
17.0600	Nursing Occupations Cluster	155	(113.77)
17.9900	Health Occupations Cluster	159	(116.71)

Home Economics

20.0101	Consumer & Homemaking	NA	
20.0201	Child Care Services	231	(169.55)
20.0301	Clothing & Textiles Production & Services	200	(146.80)
20.0401	Food Production, Management & Service	234	(171.76)
20.0501	Commercial Painting & Interior Treat. Srv.	219	(160.75)
20.0601	Building & Home Maintenance & Services	367	(269.38)

Trade & Industrial

09.0701	Radio & Television	264	(193.78)
12.0403	Cosmetology	50	(36.70)
43.0107	Law Enforcement	296	(217.26)
46.0301	Electrical & Power Transmission Install.	360	(264.24)
46.9999	Construction Trades	273	(200.38)
47.0101	Electrical & Electronics Repair	342	(251.03)
47.0102	Business & Vending Machine Repair	353	(259.10)
47.0106	Major Appliance Repair	476	(349.38)
47.0201	Heating, Air Conditioning, & Refrigeration	433	(317.82)
47.0301	Industrial Equipment Maintenance & Repair	531	(389.75)
47.0401	Hydraulics & Pneumatics	477	(350.12)
47.0408	Watch Repair	165	(121.11)
47.0601	Mechanics Cluster	363	(266.44)

Trade & Industrial (Con't)

47.0602	Aircraft Mechanics	\$465	(\$341.31)
47.0603	Auto Body Repair	233	(171.02)
47.0604	Auto Mechanics	199	(146.07)
47.0605	Diesel Mechanics	504	(369.94)
47.0606	Small Engine Repair	303	(222.40)
48.0101	Drafting	381	(279.65)
48.0201	Graphic & Printing Communications	318	(233.41)
48.0503	Machine Tool Operation/Machine Shop	363	(266.44)
48.0506	Sheet Metal	374	(274.52)
48.0508	Welding, Brazing, & Soldering	293	(215.06)
48.0604	Plastics	366	(268.64)
48.0701	Woodworking & Furniture Making	266	(195.24)
49.0101	Air Transportation	211	(154.87)

ATTACHMENT B

Vocational Education
1986-87 Funding Policy
State Rank List

<u>CIP Code</u>	<u>Program Name</u>	<u>Employment Demand Rank</u>	<u>Related Placement Rank</u>	<u>Demand/ Supply Rank</u>	<u>Overall Rank</u>
07.0101	Accounting & Computing	4	3	3	1
07.9999	Business & Office Cluster				
07.0601	Secretarial Programs	2	1	13	2
20.0401	Food Production, Mgmt., & Service	1	17	2	3
01.0301	Agricultural Production	5	13	4	4
47.0101	Electrical & Electronics Repair	8	8	8	5
48.0503	Machine Tool Operation/ Machine Shop	6	10	10	6
48.0599	Manufacturing Cluster				
08.0700	Marketing & Distributive Education	3	5	19	7
17.0100	Dental Occupations	16	7	11	8
17.0600	Nursing Occupations	7	10	17	9
17.9900	Health Cluster				
17.0300	Lab Occupations				
46.0301	Electrical & Power Transmission	11	20	4	10
47.0102	Business & Vending Machine Repair	27	4	6	11
17.0503	Medical Office	21	2	16	12
48.0101	Drafting	16	5	21	13
07.0301	Business Data Processing	12	9	25	14
07.0305	Programming				
20.0201	Child Care & Guidance Mgmt., & Service	9	26	12	15

<u>CIP Code</u>	<u>Program Name</u>	<u>Employment Demand Rank</u>	<u>Related Placement Rank</u>	<u>Demand/ Supply Rank</u>	<u>Overall Rank</u>
01.0601	Horticulture	10	30	7	16
20.0301	Clothing, Apparel, & Textiles	20	24	1	17
12.0403	Cosmetology	15	12	24	18
46.9999	Construction Trades	12	21	25	19
47.0604	Auto Mechanics	14	14	30	20
01.0201	Agricultural Mechanics	25	15	22	21
47.0605	Diesel Mechanics				
48.0508	Welding, Brazing & Soldering	18	17	28	22
47.0201	Heating, Air Conditioning, & Refrigeration	26	15	23	23
48.0701	Woodworking & Furniture Making	24	22	9	24
20.0601	Institutional Home Mgmt., & Support Services	22	27	18	25
03.0101	Renewable Natural Resources	30	17	20	26
48.0201	Graphic & Printing Comm.	19	22	27	27
20.0501	Home Furnishings & Equip.	27	28	15	28
47.0603	Auto Body Repair	23	20	29	29
47.0106	Major Appliance Repair	29	29	14	30
47.0606	Small Engine & Related Equipment Repair	31	24	31	31

ATTACHMENT C

Vocational Education
1987-88 Funding Policy
State Rank List

<u>CIP Code</u>	<u>Program Name</u>	<u>Employment Demand Rank</u>	<u>Related Placement Rank</u>	<u>Demand/ Supply Rank</u>	<u>Overall Rank</u>
07.0101	Accounting & Computing	4	3	5	1
07.9999	Business & Office Cluster				
07.0601	Secretarial Programs	2	1	13	2
20.0401	Food Production, Mgmt., & Service	1	18	1	3
08.0700	Marketing & Distributive Education	3	4	18	4
01.0301	Agricultural Production	5	15	6	5
48.0503	Mach Tool Oper/Mach Shop	6	12	8	6
48.0599	Manufacturing Cluster				
47.0101	Electrical & Electronics Repair	8	8	10	7
47.0102	Business & Vending Machine Repair	27	1	4	8
17.0100	Dental Occupations	16	8	11	9
17.0600	Nursing Occupations	7	14	17	10
17.9900	Health Cluster				
17.0300	Lab Occupations				
01.0601	Horticulture	10	20	9	11
46.0301	Electrical & Power Transmission	11	26	3	12
48.0101	Drafting	16	4	21	13
17.0503	Medical Office	21	4	16	14
07.0301	Business Data Processing	12	8	24	15
07.0305	Programming				

<u>CIP Code</u>	<u>Program Name</u>	<u>Employment Demand Rank</u>	<u>Related Placement Rank</u>	<u>Demand/ Supply Rank</u>	<u>Overall Rank</u>
20.0301	Clothing, Apparel & Textiles	20	28	2	16
20.0201	Child Care & Guidance Mgmt., & Service	9	27	15	17
01.0201	Agricultural Mechanics	25	7	22	18
47.0606	Diesel Mechanics				
12.0403	Cosmetology	15	13	26	19
46.9999	Construction Trades	12	18	25	20
48.0701	Woodworking & Furniture Making	24	24	7	21
47.0604	Auto Mechanics	14	15	30	22
47.0601	Mechanics Cluster				
47.0201	Heating, Air Conditioning & Refrigeration	26	11	23	23
48.0508	Welding, Brazing & Soldering	18	15	27	24
48.0201	Graphic & Printing Communications	19	21	28	25
20.0501	Home Furnishings & Equipment	27	31	12	26
20.0601	Institutional Home Mgmt. & Support Services	22	29	20	27
47.0106	Major Appliance Repair	29	30	14	28
47.0603	Auto Body Repair	23	22	29	29
03.0101	Renewable Natural Resources	30	25	19	30
47.0606	Small Engine & Related Equipment Repair	31	22	31	31

GUIDELINES FOR EXPENDITURES

I. GUIDELINES FOR EXPENDITURE CATEGORIES

Program costs are those costs which can be identified as being directly associated with a particular C.I.P. program.

A) Accounting Provisions

Added cost funds are appropriated by the State Legislature as a line item of categorical state aid. Funds so earmarked by the Legislature for added cost are used solely for the purpose of vocational education program support and improvement. The accounting system utilized by the local educational agency must be capable of providing expenditure data at the program level. The revised accounting manual, Bulletin 1022, is the basis for the maintenance of an accounting system used in identifying the total costs of vocational education programs.

B) Allocable Expenditures

Added cost funds received by school districts and area centers must be spent in approved programs. The categories of allowable expenditures include: instructional salaries (including regular teacher aides and paraprofessionals), instructional travel, instructional supplies, equipment purchases, rental and maintenance, vocational transportation, inservice education, approved vocational administration, placement and follow-up, other costs directly associated with the operation of the program, and indirect costs (unrestrictive cost rates). Unallowable expenditures include remodeling and construction of school plant costs.

C) Expenditure Guidelines

Guidelines have been established by the Vocational-Technical Education Service for several key expenditure categories. These guidelines were established based upon composite average expenditures identified by local educational agencies' expenditure reports for vocational programs. The guidelines shown on the next page should serve as benchmarks for adopting local budgeting of funds.

D) Program Serial Number (PSN)

Expenditures are collected by individual C.I.P. Code and PSN. Each program has a unique five-digit PSN. Exceptions are Coop, Less-Than-Class-Size, and federally funded programs which are collected in one column by building.

TOTAL VOCATIONAL EDUCATION LINE ITEM
COST EXPENDITURES AS A PERCENT OF TOTAL COST

<u>Expenditure Categories</u>	<u>FY 1985 Total Cost State Average</u>
1. Instructional Salary/Fringes Aides & Paraprofessionals	53%
2. Instructional Travel	0%
3. Contracted Programs	2%
4. Instructional Supplies	5%
5. Equipment (purchase/rental/maintenance)	9%
6. Inservice	1%
7. Vocational Administration*	7%
8. Placement & Follow-up	4%
9. Other Direct Costs (specify)	4%
10. Indirect Costs	15%

*Vocational-Technical specialists and directors will continue to be funded up to a maximum of 40 percent of eligible contracted salary and travel. Reimbursement may also be approved for authorized travel for CEPD specialists.

E) Special Expenditure Reporting for Consumer Home Economics Program

Under the Carl D. Perkins Vocational Education Act, it will be necessary to report federal funds received and expended for consumer home economics sections. This means that federal funds under Title III, Part B (Consumer Homemaking), will need to be identified and separate expenditures shown for these federal funds.

Reporting of total expenditures for the Consumer Home Economics program will continue to be required on the computer pre-printed VE-4033 forms. A separate single column breakout of the federal funds used for program improvement, expansion and updating will also be required to be completed. These federal funds must be expended for the Consumer Home Economics program in the following categories:

Inservice (Includes evaluation for improving programs)
 Instructional Travel
 Instructional Materials (Includes resource people;
 field trips)
 Equipment Rental, Repair, or Purchase

In addition, a separate column will appear on the VE-4033 form for "parenthood" courses in which all costs pertaining to this program will need to be identified on a line item basis. These separate costs are reported because of the need to identify the added cost of parenthood under the State School Aid Act, Section 61.

F) Expenditure Categories

Further definition of expenditure categories is provided in this section. Expenditure guidelines contain the percentage of total cost to be allocated for a particular expenditure category where appropriate.

1. Teaching/Instructional Salaries

Pupil-teacher ratios have been established at a maximum of 22 students per teacher to provide for the safety of both students and instructors. Exceptions to this rule are made in cases where paraprofessionals augment the instructional process. Vocational-technical education programs also require extensive one-to-one individualized instruction techniques that cannot be accomplished with high pupil-teacher ratios within the period of the vocational program operation.

The category of "Aides and Paraprofessionals" includes teacher aides and paraprofessional staff associated with approved vocational education programs.

2. Contracted Programs

To encourage expanded program opportunities, school districts and area centers may contract with private business or industry, private schools or community colleges. Contracting focuses upon another delivery system capable of providing training for students other than what may be traditionally or economically feasible under controlled conditions.

3. Instructional Travel

Instructional travel for purposes of co-op coordination, field work of agricultural teachers, and other similar activities are direct costs associated with vocational education programs.

4. Equipment Rental & Maintenance

Rental of instructional equipment and maintenance contract costs are included in this category.

5. Instructional Supplies

A substantial added cost involved in the operation of vocational programs is that of supplies and materials. These consumable supply costs vary among vocational programs, but the state-wide average represents seven (7) percent of the extra costs of the programs. Examples of supply costs include welding rods, specialized resource materials, lumber, stock steel, and routine supplies. Refer to the Chart of Accounts (Appendix A) for operation of sales-producing programs which require unique transactions.

6. Other Expenses

Other costs usually considered as an integral part of the program may be allowable. Examples of other expenses would be title and attorney fees for the on-site building trades program, dues for professional organizations, field trips and resource persons. These and other such costs are reported in this category.

7. Improvement of Instruction (Inservice)

A priority for added cost funding is that of inservice education for teachers and administrators of vocational-technical education. Inservice education associated with the use of performance objectives, competency-based instruction, and other recognized program standards of quality inservice needs constitute first priority in this area. Costs are generally not allowable where the primary purpose of the training is applicable to general education facility or to obtain credits toward a general education or vocational education degree.

Curriculum development and inservice activities may be included as costs of improvement of instruction. Documentation needs to be available to show that these activities are directly related to the approved vocational education programs. Charging a general curriculum director's salary to

vocational education is not an appropriate vocational costs.

8. Vocational Administration

The Department recognizes the need for a variety of leadership positions to administer vocational-technical education at local and CEPD levels. Such administration should provide for primary leadership for the vocational-technical program. Expenditures of approved and/or qualified vocational education directors or shared-time directors and their secretarial and office staffs are reported as costs in this category.

9. Placement & Follow-Up

Job placement and follow-up activities are allowable expenditures provided that these activities are compatible with the following four major objectives of job placement.

- a) Provide job placement and follow-up services to all students enrolled in, and former students of, vocational education programs to enable entry into commensurate suitable employment.
- b) Provide pre-employment activities (both individual and group) to all students enrolled in, and former students of, vocational education programs that enable them to obtain and retain employment. These activities may include:
 - (1) Employability Skill Training
 - (2) Job Seeking Clinics
 - (3) Job Clubs
 - (4) Employment Counseling
 - (5) Vocational skill assessment as needed for job selection.
- c) Develop and maintain lines of communication with business and industry that facilitate the successful entry into the labor market or provide support services for teachers and co-op coordinators.
- d) Maintain a recordkeeping system which documents the effectiveness of the job placement program. These records should be maintained for audit purposes.

Expenditures in job placement and follow-up may occur in one or more of the following categories:

Job Placement Director/Coordinator
 Job Developer/Job Placement Specialist
 Secretarial/Clerical Staff
 Travel
 Data Processing Equipment Rental
 Printing & Duplication
 Employee Benefits
 Professional Development
 Communication & Phone

10. Business & Central Services (Indirect) - Area Centers Only

This category consists of both fiscal services and operation and maintenance services. It is reserved for area center use only, and replaces the indirect unrestrictive cost rate.

11. Other Pupil Services (Youth Organizations)

Funds expended for vocational youth organizations are reported under "Other Pupil Services." In general, the costs allowed are those incurred by teaching staff; student costs are not allowable. (Refer to Appendix B for additional details.)

12. Other Support Staff Services

This category includes vocational education costs in the following specific areas: audio/visual, educational television, computer-assisted instruction, other media, other staff services, and advisory committees.

13. Executive & School Administration (Indirect) - Area Centers Only

Reserved for area centers, expenditures incurred for executive administration in those cases where boards of education have specifically assigned administration on-going vocational responsibility. This category also includes school administration such as school building principals, assistants, and their secretarial staff.

14. Support Service Employee Benefits

Fringe benefits associated with employees identified in the support staff who have direct responsibilities for vocational education support services should be reported in this category.

15. Indirect Costs - Non-Area Centers Only

Use unrestricted indirect cost rate for districts up to a reportable maximum of 15 percent.

An indirect cost rate is used to determine the amount of indirect cost each program should bear. Vocational education laboratories are usually larger and require additional maintenance and utilities; therefore, they are more costly than regular programs.

In recognition of this fact, the unrestricted indirect cost rate applies, which includes the rate pertaining to "Operation of Plant, Maintenance of Plant, and Salaries of Business Personnel," as well as normal indirect cost categories.

The unrestricted indirect cost rate is computed by the Accounting Office from each district's audited Form DS-4169-B, "Annual School District Financial Report," from the Michigan Department of Education Department Services.

16. Equipment Purchase

Up-to-date equipment is an important component of a quality vocational education program. Any expenditures incurred as a result of purchasing equipment should be reported in this category. This would include the replacement of existing equipment and additional equipment not previously a part of the laboratory.

Prior approval is needed before buying vehicles, trucks, or tractors. Such vehicles will be used exclusively for vocational education.

II. ACCOUNTING PROVISIONS FOR REPORTING COSTS OF VOCATIONAL EDUCATION

A) Chart of Accounts

The vocational education added cost program has a limited group of expenditures which are considered as eligible to be included in the Vocational Education Cost Report. The Chart of Accounts, Appendix A, is provided to school districts to provide all possible coding choices of funding and objects for the added cost program. Whenever the function code is provided without object code choices, all object codes may be used. The over-riding consideration in the eligibility of an expenditure is that the expenditure be a direct benefit to the vocational education added cost program.

The Chart of Accounts in Appendix A has asterisks in front of certain functions. Those function codes can be used only by districts which operate vocational education centers in a free standing building (one that is exclusively used for vocational education instruction).

A second chart (Appendix C) is the State Code - Fiscal Year Chart. This group of codes is intended to provide the school district with the means to gather the costs of the various added cost programs in a reportable manner.

For those costs that must be allocated by formula, the state code 500 should be used. Annually or periodically, whichever is most desirable for the school district, the business office should distribute the allocable costs to the various added cost programs that share in the expenditures.

B) Transactions

1. Definition

Vocational education instructional supplies and materials used only for "instructional purposes." The term "instructional purposes" does not include supplies and materials which are purchased for resale. Examples of instructional supplies and materials used for instructional purposes are: manuals, textbooks, periodicals, hand tools, work clothes. Supplies and materials for resale include spark plugs for tune-ups of client cars, food for a lunch counter operated for instructional purposes, and lumber and other building supplies used in the construction of a house in the building trades program.

2. Resale of Supplies/Materials

Vocational education added cost programs that use resale supplies and materials usually include small business operations which require unique transactions, as opposed to the normal instructional program. The following examples represent the Department's suggested method of recording the transactions in the school district records. Any transaction recorded that would produce the same effect on the district's fund balance would be acceptable. The basic assumption made in each of the types of transactions is that the activity's primary purpose is instruction. If the cost of the activity is greater than the reimbursement from clients, the excess cost is the cost of instruction. The amount of cost that the school district should recognize is instructional costs--those which are in excess of reimbursement except for direct cost of the instructor.

a) Resale Example - Small Sales

In the example of small sales, the following transactions are the result of such operation, where there is a net loss from operation.

Instruction-Supplies & Materials	\$200	
Cash		\$200

Record purchase of auto parts

Cash	90	
Instruction-Supplies & Materials		90

Record money received from auto mechanic class client as an abatement to the expenditure account.

Inventory - Auto Parts	100	
Instruction-Supplies & Materials		100

Record inventory at the close of year of auto parts purchased but not used.

An analysis of the above transactions shows that the school district has absorbed a loss in parts in the amount of \$10 as an instructional cost.

Original Purchase		\$200
Less:		
Cash from Client	\$ 90	
Inventory	100	<u>\$190</u>
		\$10

A school district may operate with a perpetual inventory method of handling supplies and materials. In this case, the following transaction is suggested:

Inventory - Auto Parts	\$200	
Cash		\$200

Record purchase of auto parts to be placed in inventory until used.

Supplies & Materials	90	
Inventory - Auto Parts		90

Record use of parts from
inventory by auto mechanics
class.

Cash	90	
Supplies & Materials		90

Record money received from
auto mechanic class client
as an abatement to the expen-
diture account.

Supplies & Materials	10	
Inventory - Auto Parts		10

Record adjustment to inventory
to reflect actual inventory of
\$100 in auto parts.

b) Resale Example - Construction Trades

The construction project represents a different problem primarily because of the large amount of dollars involved in the single transaction. Although a school district can operate a building construction project within the shop area, the normal procedure is to construct a home that will be sold after completion. Again, the primary purpose of the construction is instruction and not profit making. The transactions involved in the construction should not affect the fund balance of the school district until the final sale. At that time, the determination is made whether there has been a cost of instruction or whether there has been a gain from the sale of a fixed asset of the school district. The transactions that follow represent a cost of instruction (loss on sale).

Inventory - Building #1	\$10,000	
Cash		\$10,000

Record purchases of supplies
and materials for construction
trades project.

Inventory - Building #1	5,000	
Cash		5,000

Record cost of excavation and
grading for construction trades
project.

Inventory - Building #1	4,000	
Cash		4,000

Record cost of electrical and plumbing and heating contractors' services for construction trades project.

Cash	18,000	
Instruction-Supplies & Materials	1,000	
Inventory - Building #1		19,000

To record sale of House #1 and to Charge the instructional materials account for the loss on the sale of the house.

If the selling price had been \$20,000, which would have provided a gain on the sale of the house, the last entry of the above example would be:

Cash	20,000	
Inventory - Building #1		19,000
Gain of Sale of Fixed Assets		1,000

To record the sale of the house and the gain from the sale.

APPENDIX A
VOCATIONAL EDUCATION - ADDED COSTS
CHART OF ACCOUNTS

120	ADDED NEEDS
127	VOCATIONAL EDUCATION
1240	TEACHING
1630	AIDES
1870	TEMP. TEACHING
3100	CONTRACTED INSTRUCTION
3110	PROF. TECH.-INSTRUCTIONAL SERVICES
3210	TRAVEL - LOCAL
3700	TUITION
4120	REPAIR & MAINTENANCE - EQUIPMENT
4210	RENT OF LAND AND BUILDINGS
4220	RENTALS - EQUIPMENT
5100	TEACHING SUPPLIES AND MATERIALS
5200	TEXTBOOKS
5900	OTHER SUPPLIES AND MATERIALS
7900	MISCELLANEOUS EXPENSE
*130	ADULT AND CONTINUING EDUCATION
1240	TEACHING
1630	AIDES
1870	TEMP. TEACHING
3100	CONTRACTED INSTRUCTION
3110	PROF. TECH.-INSTRUCTIONAL SERVICES
3210	TRAVEL - LOCAL
3700	TUITION
4120	REPAIR & MAINTENANCE - EQUIPMENT
4210	RENT OF LAND AND BUILDINGS
4220	RENTALS - EQUIPMENT
5100	TEACHING SUPPLIES AND MATERIALS
5200	TEXTBOOKS
5900	OTHER SUPPLIES AND MATERIALS
7900	MISCELLANEOUS EXPENSE
*190	UNCLASSIFIED
1XX	EMPLOYEE BENEFITS - INSTRUCTION
2110	EMPLOYEE - GROUP LIFE INSURANCE
2120	EMPLOYEE - GROUP DISABILITY INSURANCE
2130	EMPLOYEE - GROUP HEALTH AND ACCIDENT INSURANCE
2140	EMPLOYEE - DENTAL HEALTH CARE
2190	EMPLOYEE - OTHER GROUP INSURANCE
2810	RETIREMENT - FEDERAL PROGRAMS
2820	RETIREMENT - STATE AND LOCAL
2830	EMPLOYER SOCIAL SECURITY
2840	WORKER'S COMPENSATION
2850	UNEMPLOYMENT COMPENSATION
2900	OTHER EMPLOYEE BENEFITS
1XX	CAPITAL OUTLAY - INSTRUCTION
6000	CAPITAL OUTLAY

- 210 SUPPORT SERVICES - PUPIL
 - 212 GUIDANCE SERVICES
 - 1220 COUNSELING
 - 1620 SECRETARY - CLERICAL - BOOKKEEPER
 - 3210 TRAVEL - LOCAL
 - 3220 TRAVEL - WORKSHOPS AND CONFERENCES
 - 3430 MAILING AND POSTAGE
 - 4120 REPAIR & MAINTENANCE - EQUIPMENT
 - 4220 RENTALS - EQUIPMENT
 - 4270 RENTALS - DATA PROCESSING EQUIPMENT
 - 5300 LIBRARY BOOKS
 - 5400 PERIODICALS
 - 5900 OTHER SUPPLIES AND MATERIALS
 - 7900 MISCELLANEOUS EXPENSES
 - 219 OTHER PUPIL SERVICES
 - 1290 OTHER PROFESSIONAL EDUCATIONAL
 - 3190 PROF. TECH.-OTHER PROF. & TECH
 - 3210 TRAVEL - LOCAL
 - 3220 TRAVEL - WORKSHOPS & CONFERENCES
 - 5900 OTHER SUPPLIES AND MATERIALS
 - 7400 DUES AND FEES
 - 7900 MISCELLANEOUS EXPENSE
- 220 SUPPORT SERVICES - INSTRUCTIONAL STAFF
 - 221 IMPROVEMENT OF INSTRUCTION
 - 1160 SUPERVISION - MANAGEMENT
 - 1210 CURRICULUM
 - 1240 TEACHING
 - 1250 INSTRUCTIONAL CONSULTING
 - 1620 SECRETARY - CLERICAL - BOOKKEEPER
 - 3120 PROF. TECH.-INSTR. PROGRAM IMPROVEMENT
 - 3210 TRAVEL - LOCAL
 - 3220 TRAVEL - WORKSHOPS AND CONFERENCES
 - 4120 REPAIR & MAINTENANCE - EQUIPMENT
 - 4220 RENTALS - EQUIPMENT
 - 4290 RENTALS - OTHER RENTALS
 - 4900 OTHER PURCHASED SERVICES
 - 5400 PERIODICALS
 - 5900 OTHER SUPPLIES AND MATERIALS
 - 7400 DUES AND FEES
 - 7900 MISCELLANEOUS EXPENSE
 - 220 LIBRARY
 - 1230 LIBRARIAN
 - 1620 SECRETARY - CLERICAL - BOOKKEEPER
 - 1630 AIDES
 - 3430 MAILING AND POSTAGE
 - 3600 PRINTING AND BINDING
 - 4120 REPAIR & MAINTENANCE - EQUIPMENT
 - 4220 RENTALS - EQUIPMENT
 - 4270 RENTALS - DATA PROCESSING EQUIPMENT
 - 4290 RENTALS - OTHER RENTALS
 - 5300 LIBRARY BOOKS

5400 PERIODICALS
 5900 OTHER SUPPLIES AND MATERIALS
 7400 DUES AND FEES
 7900 MISCELLANEOUS EXPENSE
 223 AUDIOVISUAL
 1260 INSTRUCTIONAL MEDIA
 1550 CRAFTS AND TRADES
 1620 SECRETARY - CLERICAL - BOOKKEEPER
 1630 AIDES
 1670 LABORER
 3430 MAILING AND POSTAGE
 3600 PRINTING AND BINDING
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4220 RENTALS - EQUIPMENT
 4290 RENTALS - OTHER RENTALS
 5100 TEACHING SUPPLIES AND MATERIALS
 5400 PERIODICALS
 5900 OTHER SUPPLIES AND MATERIALS
 7400 DUES AND FEES
 7900 MISCELLANEOUS EXPENSE
 224 EDUCATIONAL TELEVISION AND RADIO
 1260 INSTRUCTIONAL MEDIA
 1550 CRAFTS AND TRADES
 1620 SECRETARIAL - CLERICAL - BOOKKEEPER
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4220 RENTALS - EQUIPMENT
 4270 RENTALS - DATA PROCESSING EQUIPMENT
 4290 RENTALS - OTHER RENTALS
 5300 LIBRARY BOOKS
 5400 PERIODICALS
 5900 OTHER SUPPLIES AND MATERIALS
 7400 DUES AND FEES
 7900 MISCELLANEOUS EXPENSE
 225 COMPUTER ASSISTED INSTRUCTION
 1260 INSTRUCTIONAL MEDIA
 1550 CRAFTS AND TRADES
 1590 OTHER TECHNICAL
 1620 SECRETARIAL - CLERICAL - BOOKKEEPER
 3210 TRAVEL - LOCAL
 3220 TRAVEL - WORKSHOPS AND CONFERENCES
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4220 RENTALS - EQUIPMENT
 4270 RENTALS - DATA PROCESSING EQUIPMENT
 4290 RENTALS - OTHER RENTALS
 5300 LIBRARY BOOKS
 5400 PERIODICALS
 5900 OTHER SUPPLIES AND MATERIALS
 7400 DUES AND FEES
 7900 MISCELLANEOUS EXPENSE
 226 SUP. AND DIR. - INSTRUCTIONAL STAFF
 1170 PROGRAM/DEPARTMENT DIRECTION

1620 SECRETARIAL - CLERICAL - BOOKKEEPER
 3210 TRAVEL - LOCAL
 3220 TRAVEL - WORKSHOPS AND CONFERENCES
 3430 MAILING AND POSTAGE
 3600 PRINTING AND BINDING
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4220 RENTALS - EQUIPMENT
 4270 RENTALS - DATA PROCESSING EQUIPMENT
 5300 LIBRARY BOOKS
 5400 PERIODICALS
 5900 OTHER SUPPLIES AND MATERIALS
 7400 DUES AND FEES
 7900 MISCELLANEOUS EXPENSE
 227 OTHER EDUCATIONAL MEDIA SERVICES
 1260 INSTRUCTIONAL MEDIA
 1270 VISUAL HANDICAPPED MEDIA
 1620 SECRETARIAL - CLERICAL - BOOKKEEPER
 3210 TRAVEL - LOCAL
 3220 TRAVEL - WORKSHOPS AND CONFERENCES
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4210 RENT OF LAND AND BUILDING
 4220 RENTALS - EQUIPMENT
 5400 PERIODICALS
 5900 OTHER SUPPLIES AND MATERIALS
 7400 DUES AND FEES
 7900 MISCELLANEOUS EXPENSE
 229 OTHER INSTRUCTIONAL STAFF SERVICES
 1290 OTHER PROFESSIONAL EDUCATION
 1620 SECRETARIAL - CLERICAL - BOOKKEEPER
 3210 TRAVEL - LOCAL
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4220 RENTALS - EQUIPMENT
 5900 OTHER SUPPLIES AND MATERIALS
 7900 MISCELLANEOUS EXPENSE
 231 BOARD OF EDUCATION
 3170 LEGAL SERVICES
 3180 AUDIT SERVICES
 *232 EXECUTIVE ADMINISTRATION
 *241 OFFICE OF THE PRINCIPAL
 *249 OTHER SCHOOL ADMINISTRATORS
 *254 OPERATION AND MAINTENANCE
 259 OTHER BUSINESS SERVICES
 3910 LIABILITY INSURANCE
 3920 BUILDING INSURANCE
 260 SUPPORT SERVICES - CENTRAL
 262 PLANNING, RESEARCH, DEVELOPMENT AND EVALUATION
 1180 RESEARCH
 1620 SECRETARIAL - CLERICAL - BOOKKEEPER
 3600 PRINTING AND BINDING
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4220 RENTALS - EQUIPMENT

1620 SECRETARIAL - CLERICAL - BOOKKEEPER
 3210 TRAVEL - LOCAL
 3220 TRAVEL - WORKSHOPS AND CONFERENCES
 3430 MAILING AND POSTAGE
 3600 PRINTING AND BINDING
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4220 RENTALS - EQUIPMENT
 4270 RENTALS - DATA PROCESSING EQUIPMENT
 5300 LIBRARY BOOKS
 5400 PERIODICALS
 5900 OTHER SUPPLIES AND MATERIALS
 7400 DUES AND FEES
 7900 MISCELLANEOUS EXPENSE
 227 OTHER EDUCATIONAL MEDIA SERVICES
 1260 INSTRUCTIONAL MEDIA
 1270 VISUAL HANDICAPPED MEDIA
 1620 SECRETARIAL - CLERICAL - BOOKKEEPER
 3210 TRAVEL - LOCAL
 3220 TRAVEL - WORKSHOPS AND CONFERENCES
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4210 RENT OF LAND AND BUILDING
 4220 RENTALS - EQUIPMENT
 5400 PERIODICALS
 5900 OTHER SUPPLIES AND MATERIALS
 7400 DUES AND FEES
 7900 MISCELLANEOUS EXPENSE
 229 OTHER INSTRUCTIONAL STAFF SERVICES
 1290 OTHER PROFESSIONAL EDUCATION
 1620 SECRETARIAL - CLERICAL - BOOKKEEPER
 3210 TRAVEL - LOCAL
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4220 RENTALS - EQUIPMENT
 5900 OTHER SUPPLIES AND MATERIALS
 7900 MISCELLANEOUS EXPENSE
 231 BOARD OF EDUCATION
 3170 LEGAL SERVICES
 3180 AUDIT SERVICES
 *232 EXECUTIVE ADMINISTRATION
 *241 OFFICE OF THE PRINCIPAL
 *249 OTHER SCHOOL ADMINISTRATORS
 *254 OPERATION AND MAINTENANCE
 259 OTHER BUSINESS SERVICES
 3910 LIABILITY INSURANCE
 3920 BUILDING INSURANCE
 260 SUPPORT SERVICES - CENTRAL
 262 PLANNING, RESEARCH, DEVELOPMENT AND EVALUATION
 1180 RESEARCH
 1620 SECRETARIAL - CLERICAL - BOOKKEEPER
 3600 PRINTING AND BINDING
 4120 REPAIR & MAINTENANCE - EQUIPMENT
 4220 RENTALS - EQUIPMENT

APPENDIX B

FEDERAL RULES AND REQUIREMENTS FOR
STUDENT ORGANIZATION SUPPORT ACTIVITIES

A school district may use added cost funds to support activities of vocational education student organizations which are:

- ...An integral part of the vocational instruction offered;
- ...Supervised by vocational education personnel who are qualified in the occupational area which the student organization represents; and
- ...Available to all students in the instructional program without regard to membership in any student organization.

An integral part of vocational instruction includes:

1. Training in an organized educational program which is directly related to the preparation of individuals for paid or unpaid unemployment in a career requiring other than a baccalaureate or higher degree; or
2. Field or laboratory work incident to the vocational training; or
3. Development and acquisition of instructional materials, supplies and equipment for instructional services.

An integral part of vocational instruction does not include:

1. Lodging, feeding, conveying or furnishing transportation to conventions or other forms of social assemblage;
2. Purchase of supplies, jackets and other effects for students' personal ownership;
3. Cost of non-instructional activities such as athletic, social or recreational events;
4. Printing and dissemination of non-instructional newsletters;
5. Purchase of awards in recognition of students, advisors and other individuals; or
6. Payment of membership dues.

APPENDIX C
GENERAL FUND
EXPENDITURE ACCOUNTS

Fifth Dimension-(Four positions)-State Code and Fiscal Year

FIRST THREE
POSITIONS OF FOUR

STATE CODE

500	Vocational Education - Added Cost - General
	<u>Agriculture</u>
501	01.0201-Agriculture Mechanics
502	01.0301-Production Agriculture
503	01.0401-Agricultural Products & Processing
504	01.0601-Horticulture
505	03.0101-Renewable Natural Resources
	<u>Business & Office</u>
511	07.0101-Accounting & Computing
513	07.0301-Business Data Processing
514	07.0305-Computer Programming
515	07.0601-Secretarial Programs
516	07.9999-Business & Office Cluster
	<u>Distributive Education</u>
521	08.0700-Marketing & Distribution
	<u>Health</u>
531	17.0100-Dental Occupations Cluster
532	17.0200-Diagnostic Services
533	17.0300-Laboratory Occupations Cluster
534	17.0503-Medical Office Cluster
535	17.0507-Pharmacy Assisting
536	17.0600-Nursing Occupations Cluster
537	17.9900-Health Occupations Cluster
	<u>Home Economics</u>
541	20.0101-Consumer & Homemaking
542	20.0201-Child Care & Guidance Mgmt. & Service
543	20.0301-Clothing, Apparel & Textiles Management
544	20.0401-Food Production, Management & Service
545	20.0501-Home Furnishings & Equipment Management
546	20.0601-Ins'l Home Mgmt & Supporting Services Gen.

FIRST THREE
POSITIONS OF FOUR

STATE CODE

Trade & Industrial

561	09.0701-Radio & Television
562	12.0403-Cosmetology
564	43.0107-Law Enforcement
565	46.0301-Electrical & Power Transmission
566	46.9999-Construction Trades
567	47.0101-Electrical & Electronics Repair
568	47.0102-Business & Vending Machine Repair
569	47.0106-Major Appliance Repair
570	47.0201-Heating, Air Conditioning & Refrigeration
571	47.0301-Industrial Equipment Maintenance & Repair
572	47.0401-Hydraulics & Pneumatics
573	47.0408-Watch Repair
574	47.0601-Mechanics Cluster
575	47.0602-Aircraft Mechanics
576	47.0603-Auto Body Repair
577	47.0604-Auto Mechanics
578	47.0605-Diesel Mechanics
579	47.0606-Small Engine & Related Equipment Repair
580	48.0101-Drafting
581	48.0201-Graphic & Printing Communications
582	48.0503-Machine Tool Operation/Machine Shop
583	48.0506-Sheet Metal
584	48.0508-Welding, Brazing & Soldering
585	48.0604-Plastics
586	48.0701-Woodworking & Furniture Making
587	49.0101-Air Transportation
588	59.0000-Less-Than-Class-Size Contracts
589	00.0000-Co-op Coordination
590	00.ADLT-Adult
591	00.FEDL-Consumer & Homemaking

APPLICATION GUIDELINES FOR SECONDARY VOCATIONAL INSTRUCTIONAL TOOLS AND EQUIPMENT REIMBURSEMENT

I. INTRODUCTION

The guidelines that follow will be applied to all new program (VE-4001C) and program improvement (VE-4001D) applications submitted with the CEPD Annual Plan. Contracted programs are ineligible for new or program improvement equipment grants. In addition to these guidelines the Michigan Department of Education, Vocational-Technical Education Service annually updates an Instructional Tools and Equipment List, which must be used when completing an application. This list is available upon request from V-TES and includes most CIP code programs. The appropriate V-TES occupational specialist should be contacted for programs not appearing in the list. Approval of application items will be based upon this list.

II. GENERAL APPROVAL CRITERIA FOR ALL INSTRUCTIONAL EQUIPMENT

- A) All instructional equipment purchased must meet compliance standards outlined in Subparts O and P of the Federal Register, Part II, Department of HEW, EDGAR, dated Thursday, April 3, 1980. For those interested, each CEPD Vocational-Technical Specialist has a copy to review.
- B) Only instructional equipment purchased after State Board approval during the fiscal year for which the application is effective will be eligible for reimbursement.
- C) Acquisition of instructional equipment must be in accordance with the bidding policies and procedures established by the local education agency, state laws governing acquisition, and Subpart P of the Federal Register, EDGAR, dated Thursday, April 3, 1980.
- D) Instructional equipment items eligible for reimbursement are: moveable or fixed units of furniture or furnishings, instruments, machines, apparatus, kits, sets, or units costing \$300 or more which meet all of the following conditions:
 - 1. The item is identified on the Michigan Department of Education, Vocational-Technical Education Service Instructional Tools and Equipment List (most recent edition at time of application). Exception: any item not identified on the aforementioned list, but which the local advisory committee deems critical for the operation of the program, may be requested as a deviation and listed on the application form. Requests for more of any item than the quantity identified on the list may also be requested as a deviation and shown

on the application form. A written justification reflecting advisory committee input must be attached to the application for any item not on the recommended equipment list and for any increase in quantity over that shown on the list. Only equipment used by students to achieve instructional tasks in vocational education programs will be considered for approval. Whenever possible, the exact item description on the most current Instructional Tools and Equipment List should be used on the application. This will aid in processing requests. The final item eligibility determination will be made by V-TES staff.

2. The item retains its original shape and appearance with use.
 3. The item is non-expendable; that is, if the item is damaged or some of its parts are lost or worn out, it is usually more feasible to repair it rather than replace it with an entirely new unit.
 4. The item represents an investment of money which makes it feasible and advisable to capitalize the item.
 5. The item does not lose its identity through incorporation into a different or more complex unit or substance.
 6. The item has a useful life of more than one year.
 7. Instructional equipment items ineligible for approval unless specifically identified on the most current Instructional Tools and Equipment List for the CIP code program include: movie projectors, movie screens, projectors including the materials such as tapes, filmstrips, transparencies, micro-computer software, file cabinets, teachers' desks and chairs, and general storage cabinets. New program applicants (VE-4001C) may expend 15% minor equipment and supply allowance funds for these items. See Part IV-E for further details on the minor equipment and supply allowance.
- E) "Unit" - A unit is defined as a piece or pieces of apparatus used to perform a particular function. Components needed to operate such units may be included in the unit description.
- F) "Kit or Set" - A kit or set is defined as a number of parts of the same kind that belong together or are used together. In order for a kit or set of equipment to qualify for funding, the kit or set must be ordered from the same supplier, identifiable by catalog or catalog number.
- G) The approved CIP code program in which the instructional equipment for new programs (VE-4001C) is to be used must operate at least four class periods per day. Ongoing programs for which

program improvement (VE-4001D) funds are requested must be operating four class periods per day as reported on the most recent Fall VE-4483A enrollment report. Each program shall meet the class periods per day requirement described in the Administrative Guide for Vocational Education in Michigan, for that CIP code, and may include cooperative education related instruction if taught in the preparatory classroom/lab. An exception to the above requirement for program improvement instructional equipment follows in Section III, paragraph B, of this document.

H) Micro-computers

1. Wage-Earning Programs

Wage-earning CIP code programs will be eligible for micro-computers if identified on the most recent Instructional Tools and Equipment List.

2. Consumer Home Economics Programs

Approved Consumer Home Economics programs will be eligible for micro-computers based on the following criteria:

- a) All eligibility requirements established for new or program improvement vocational education program equipment have been met.
- b) A review of each program has been completed using the Standards for Michigan Vocational Consumer Home Economics Education Programs.
- c) A written Action Plan has been submitted to V-TES to implement the new CHE program standards.

III. APPROVAL CRITERIA SPECIFIC TO PROGRAM IMPROVEMENT EQUIPMENT

All General Approval Criteria for Instructional Equipment (Part II of this document) apply to program improvement equipment (VE-4001D). In addition, the following criteria apply:

- A) Only those wage-earning programs which are identified in the statewide follow-up report of program completers (latest report at time of submitting application) will be eligible to receive funds.
- B) Existing state approved programs operating less than four class periods per day identified on the latest Fall VE-4483A enrollment report prior to submitting the application, which jointly utilize a classroom/lab and equipment with another state approved program identified on the same Fall VE-4483A operating

less than four class periods per day (adult separate sections excluded), will be eligible for equipment reimbursement when:

1. The equipment is eligible for use in both programs as approved by V-TES and
2. Each program has an enrollment equal to or exceeding 15 students as identified on the latest VE-4483A at the time of submitting the application.

IV. FUNDING PROVISIONS

The Carl D. Perkins Vocational Education Act requires that more funds be allocated to economically depressed areas than to non-economically depressed areas. The following guidelines will apply to instructional equipment applications submitted with the CEPD Annual Plan:

- A) New program applications (VE-4001C) will be solicited annually as part of the CEPD Annual Plan. The application for equipment will establish a date when new equipment will be in use. If not in use by this date, V-TES should be promptly notified as to the reason/reasons for the delay.
- B) Starting with the CEPD Annual Plan for 1986-87 (completed in December of 1985), applications will be received for program improvement funds (VE-4001D) every TWO years. If available funds exceed eligible applications in the first year, V-TES could request additional applications in the second year.
- C) If a fiscal agent is allocated program improvement funds in the first year of the two-year application period but does not expend any or all of the grant, the fiscal agent will not be permitted to carry-over these funds for use in the second year.
- D) A 50 percent local match is required for all fiscal agents. State categorical added cost funds shall not be used as a match for state categorical equipment funds. State added cost funds may be used as a match for federal funds.
- E) New programs (VE-4001C) are eligible for a 15% reimbursement of the total equipment grant for minor equipment and supply items under \$300 in cost. These items are neither to be inventoried nor will they appear on V-TES equipment forms, however, evidence of payment must be available for audit purposes at the local education agency.
- F) Cost of installation, freight, and handling will be eligible for reimbursement.

- G) Applicants must have matching funds available to encumber equipment grants. Caution should be given to applying for more equipment than can be matched locally. This is especially true with the new two year funding cycle for program improvement instructional equipment. Applicants will be eligible for a grant in only one of the two years.

H) Allocation Procedure

1. New Program Instructional Equipment

Approved new program instructional equipment requests will have first priority over program improvement instructional equipment.

2. Program Improvement Instructional Equipment

- a) All approved program improvement equipment applicants will be divided into two categories - economically depressed and non-economically depressed. This determination is made by:
- (1) Establishing a percentage for each eligible recipient by dividing the number of Title I students in the district by the K-12 membership. Percentage calculations for education agencies serving as the fiscal agent for designated area vocational and/or cooperative shared-time programs will be based upon the total number of Title I eligible and K-12 students in the service area.
 - (2) Applicants will be placed in rank order by percentage. The total list of applicants is then divided in half with the upper one-half becoming the economically depressed category and the lower one-half becoming the non-economically depressed category.
- b) Funds will go to both economic categories in proportion to the total approved dollar request in each category. At least 51% of the funds must go to the economically depressed category.
- c) Eligible recipients will be prioritized within each category by their individual agency percentage with allocations made until all funds apportioned to each category have been used.
- d) Fiscal agencies that comprise three percent (3%) or more of the approved statewide vocational wage-earning enrollment are eligible to receive up to \$300,000 of

state or federal funds. Fiscal agencies with less than three percent (3%) of the enrollment are eligible to receive up to \$150,000 of state or federal funds.

V. RENTAL OR LEASE OF EQUIPMENT

- A) In certain instances, it may be more efficient or expedient to rent or lease rather than purchase equipment. Rentals or leases must satisfy the same criteria as are required for purchased equipment. The rental or lease of equipment from educational agencies is prohibited. Flat rate service contracts on rented or leased equipment will be considered as part of the rental or lease fee. Lease/purchase contracts will also be eligible under these provisions.
- B) Any educational agency requesting equipment rental or lease must present to V-TES a rationale which thoroughly justifies the decision to rent or lease rather than purchase. This rationale should be attached to the application.
- C) Lease/purchase of equipment will be considered and will be judged on the merits as indicated from the justification submitted to V-TES with the application.
- D) Approved lease agreements will be recognized for a maximum of two years, but a letter of request must be submitted for receiving reimbursement in the second year. These letters should be submitted by September 30 to the V-TES Planning, Evaluation, and Finance Unit.

VI. DEPARTMENT OF MANAGEMENT AND BUDGET PURCHASING PLAN

The State of Michigan has implemented a cooperative purchasing effort which is available to all units of government and school districts. You may find this a valuable service. Inquiries may be directed to:

Department of Management and Budget
Office of Purchasing
Extended Purchasing Consultant
Second Floor, Mason Building
P. O. Box 30026
Lansing, MI 48909 Phone: (517) 373-0300

VII. ENCUMBRANCE PROCEDURE

- A) The approval letter from the Superintendent of Public Instruction will specify the period of encumbrance and purchase for federal reimbursement.

- B) Form VE-4057-A, "Application for Encumbrance of Funds for Secondary Vocational Education," will be used by the education agency to inform the Michigan Department of Education, Vocational-Technical Education Service, of the total cost of eligible equipment items that have been ordered or encumbered.

VIII. REIMBURSEMENT PROCEDURE

- A) Form VE-4058-A, "Reimbursement Request for Approved Vocational Education Equipment," will be used by the educational agency to request from the Michigan Department of Education, Vocational-Technical Education Service, the total dollars of federal reimbursement for previously approved equipment items.
- B) Invoice receipts must be dated within the approved time period as specified in the approval letter in order for items to be eligible for federal reimbursement.

IX. INVENTORIES

The agency must maintain an inventory of all items of equipment with an initial cost of \$300 or more in which there is a federal interest. Items shall be maintained in inventory until their disposition.

X. DISPOSITION OF EQUIPMENT

- A) The federal rules and regulations in the Education Division General Administrative Regulations (EDGAR) allow for the states to determine an equitable depreciation schedule. Michigan has adopted the depreciation schedule as determined by the IRS publication 534, entitled, "Asset Guidelines Classes and Periods," specifying the general types of equipment under an appropriate asset depreciation range. Instructional equipment will be depreciated according to this schedule.
- B) Equipment Sold or No Longer Used:
 - 1. When the recipient no longer has need for the equipment in the program, or any of its federally assisted projects, such equipment may be used for the recipient's own official activities in accordance with the following standards:
 - a) If the equipment item had an acquisition cost of less than \$1,000 per unit, the recipient may use the equipment or sell the property and retain the proceeds.
 - b) If the equipment item has an acquisition cost of more than \$1,000 per unit, the recipient may sell the property and return to the State of Michigan the federal portion, which is computed by applying the percentage of

federal participation in the equipment purchase to the sale proceeds. The recipient may retain \$100 for administrative expenses.

- c) In the case of b) above, within 60 days of the equipment being sold or no longer used, a check in the amount of the federal share of the item(s) must be submitted to V-TES, made payable to the "State of Michigan". Include transmittal letter identifying the item number(s), descriptive code, year of approval and instructional program (CIP code). Additional specific instructions are included in the annual equipment inventory Form (VE-4284).

C) Stolen or Broken Item of Equipment

It shall be the responsibility of the local board of education to replace any stolen or broken items that have been reimbursed by vocational education funds. A copy of the invoice for the new equipment must be submitted to V-TES to establish proper worth.

D) Transfer of Equipment

Items of equipment which have been reimbursed by vocational education funds may be transferred to other vocational education programs or buildings provided prior approval is granted from V-TES. However, transfer of equipment from one site to another for the purpose of maximizing facilities and to avoid duplication of programming, is encouraged.

E) Maintenance and Repair of Reimbursed Equipment

Maintenance and repair of reimbursed equipment must be paid by the local educational agency.

For further clarification or questions concerning these Guidelines, telephone:

(517) 373-3365 = General or specific criteria, application procedures, and programmatic concerns relating to equipment.

(517) 373-6731 = Encumbrance, reimbursement, and inventory procedures relating to equipment.

TAB VI

Other Vocational Education Activities

CIVIL RIGHTS COMPLIANCE PROGRAM
FOR
VOCATIONAL EDUCATION

I. INTRODUCTION

"Vocational Education Program Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex or Handicap" were issued on March 21, 1979, under the 1977 court order in the case of Adams vs Califano.

These guidelines explain the Civil Rights responsibilities of recipients of Federal funds offering or administering vocational education programs. They derive from and provide guidance supplementary to Title VI of the Civil Rights Act of 1964 (45 CFR Part 80), Title IX of the Education Amendment of 1972 (45 CFR Part 86) and Section 504 of the Rehabilitation Act of 1973 (45 CFR Part 84). They explain how these laws and regulations apply specifically to vocational education programs.

II. DEFINITION AND REQUIREMENTS

A) Definition

The "Civil Rights Compliance Program for Vocational Education" is a comprehensive review system designed to improve the delivery of vocational education through assurance of equal opportunity for all groups and populations. As the state agency responsible for the administration of vocational education, the Department of Education is required to implement a compliance program to prevent, identify and remedy discrimination on the basis of race, color, national origin, sex or handicap by its recipients.

B) Requirements

1. Components - This Civil Rights Compliance Program must include: agency desk audits; on-site reviews; compliance plans for remediation; technical assistance to subrecipients; and submission of annual report of compliance activities to the U.S. Office for Civil Rights.

a) Agency Desk Audit: The collection and analysis of civil rights related data and information that subrecipients compile for their own purposes or that are submitted to State and Federal officials under existing authorities.

- b) **On-Site Review:** The conducting of periodic compliance reviews of selected subrecipients (i.e., an investigation of a subrecipient to determine whether it engages in unlawful discrimination in any aspect of its program).
 - c) **Compliance Plan:** A written plan developed by the local agency or institution that outlines the exact procedures it will take to correct items or issues that are not in compliance.
 - d) **Technical Assistance:** The provision of technical assistance upon request to subrecipients. This includes assisting subrecipients to identify unlawful discrimination and instructing them in remedies for, and prevention of, such discrimination.
 - e) **Report:** The submission of an annual report including a summary of desk audits, on-site reviews, compliance plans, and technical assistance activities to the State Board of Education and the U.S. Office for Civil Rights.
2. **Quotas -** Desk audits are conducted annually between March and June. A minimum of 20% of the total number of subrecipients offering vocational education programs administered by the Michigan Department of Education will be reviewed annually. (Subrecipients are comprised of K-12 districts, area vocational centers and consortia, and community colleges.)

On-site reviews are conducted annually between October and December. A minimum of 25% of the 20% of subrecipients that were desk audited must be reviewed on-site.

III. ORGANIZATION AND ADMINISTRATION OF COMPLIANCE PROGRAM

A) Administrative Unit Directing Compliance Program

The Vocational-Technical Education Service and the Higher Education Management Service, as administrative units with the Michigan Department of Education, will have primary responsibility for all aspects of the compliance program.

B) Personnel Assigned to Carry Out Compliance Programs

Vocational-Technical Education Service staff, Higher Education Management Service staff and CRW Associates (a firm from Detroit contracted to assist with OCR activities) will participate in compliance activities. Additional assistance will be provided by the State of Michigan Civil Rights Commission, the Bureau of Rehabilitation and other outside agencies as needed.

IV. SELECTION PROCEDURES

A) Desk Audit

Random sampling is used to select the appropriate number of subrecipients to be desk audited each year.

B) On-Site Review

Selection of local agencies and postsecondary institutions for on-site review is based on the compiled results of the agency desk audits conducted this year.

V. GENERAL PROCEDURES

- A) Chief administrative officers (or designees) and the CEPD Coordinators of local agencies and chief administrative officers of postsecondary institutions are notified of selection for participation in this compliance program. Official reports of any findings relative to this program are submitted to the same personnel.

B) On-Site Coordinator

Upon notification of selection to participate in the Civil Rights Compliance Program, chief administrative officers are requested to designate a local person to coordinate all related activities. This person becomes known as the "on-site coordinator".

C) Inservice

During the month of May, relevant personnel, including the on-site coordinator, of selected local agency and postsecondary institutions are inserviced on all procedures of the compliance program.

D) Monitoring Civil Rights Compliance Plans

Each compliance plan is reviewed by a designated staff member who has agreed to monitor the compliance activities for a given agency or institution. This person is responsible for evaluating the plan, for recommending its approval by the Director for Vocational Technical Education Service, and for monitoring the implementation of steps and/or activities included in the plan.

VI. REPORTING

A State Board approved report including a summary of desk audit and on-site review findings, compliance plans and technical assistance activities must be submitted to the U.S. Office for Civil Rights by July 1 of each fiscal year.

VII. REFERENCES AVAILABLE

The following documents have been produced in conjunction with this compliance program.

- A) Methods of Administration For Complying with Civil Rights Requirements in Vocational Education Programs (MOA).

This document explains how the Michigan Department of Education, Vocational-Technical Education Service, would organize and function to fulfill its Civil Rights Compliance responsibilities.

The document was also a prerequisite for approval of the 1981 State Plan for Vocational Education upon which federal funding was based.

- B) Procedures Manual for Civil Rights Compliance in Vocational Education

This document outlines procedures used by the Michigan Department of Education to carry out the obligations delegated in Section IIB of "Vocational Education Program Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex and Handicap".

- C) Office for Civil Rights Technical Assistance Guide

This Guide provides background information and technical assistance for voluntary compliance with Civil Rights regulations as they relate to vocational education. It is designed to assist local agency, area vocational center, and postsecondary institution personnel in assessing compliance needs, in modifying policies and practices for compliance, and in planning remediation.

Questions or concerns about the above documents may be directed to:

Ms. Patricia S. Dunn
Special Populations Programs and Services
Vocational-Technical Education Service
Michigan Department of Education
P. O. Box 30009
Lansing, MI 48909

(517) 335-0358

COMMUNITY-BASED ORGANIZATIONS

I. INTRODUCTION

Title III, Part A, of the Carl D. Perkins Vocational Education Act of 1984 provides for financial assistance to joint programs of eligible and community-based organizations for the conduct of special vocational education services and activities. In Michigan, these vocational education programs are approved and reimbursed through the Vocational-Technical Education Service and operate in secondary schools, intermediate school districts, community colleges, and area centers.

Coordination and cooperation with existing services and service providers as well as between a local education agency and a community-based organization is required by the legislation. It is not the intent of the legislation nor the Department of Education to supplant or replace presently provided services, but it is the intent to strengthen and improve the accessibility of that which is presently available from local, state and federal sources. All programs and/or activities conducted by the community-based organizations must conform to the applicable standards of performance and measures of effectiveness required of vocational education programs in the state.

Activities may include:

1. Outreach programs to facilitate the entrance of youth into a program of transitional services and subsequent entrance into vocational education, employment or other education training;
2. Transitional services such as attitudinal and motivational prevocational training programs;
3. Prevocational educational preparation and basic skills development conducted in cooperation with business concerns;
4. Special prevocational preparation programs targeted to innercity youth, non-English speaking youth, Appalachian youth, and the youth of other urban and rural areas having a high density of poverty who need special prevocational education programs;
5. Career intern programs;
6. Assessment of student needs in relation to vocational education and jobs; and

7. Guidance and counseling to assist students with occupational choices and with the selection of a vocational education program.

II. OPERATIONS

A) Eligibility

1. **Agency Eligibility.** Educational agencies designated as K-12 districts, intermediate school districts, area centers or community colleges are eligible to receive funds for this program. Community-based organizations are not eligible to be the fiscal agent but may receive monies for this program through the local educational agency. It is a requirement that there be cooperative efforts of educational agencies, public service agencies, and community-based organizations.
2. **Identification and Selection of Participants.** Priority is given to individuals most severely economically and educationally disadvantaged, ages 16 through 21, inclusive. Each operating agency further defines the criteria and definitions that are to be used to select participants.

B) Application Procedures

1. **Applying.** The secondary fiscal agent (K-12 school districts, intermediate school districts or area centers) submits a formal application (VE-4648C) to its CEPD Coordinator. Community colleges send the application directly to the Special Populations Programs and Services Unit, Vocational-Technical Education Service, Michigan Department of Education.
2. **CEPD Action.** The CEPD Coordinator certifies to the completeness and accuracy of the K-12 and area center applications and forwards them to the Special Populations Programs and Services Unit, Vocational-Technical Education Service (V-TES), Michigan Department of Education.
3. **Notification.** After review of the application and discussion as needed with the fiscal agent, V-TES notifies the applicant of approval or disapproval promptly after State Board of Education action. (Approval consists of a letter signed by the Superintendent of Public Instruction and a copy of the approved budget.)
4. **Timelines.** Applications are available in March of each year. The fiscal year begins on July 1 and ends on June 30. All programs must reapply on an annual basis.

C) Implementation

1. Implementation. The agency, which serves as the fiscal agent for the program, operates it in cooperation with other agencies and organizations. The fiscal agent then submits the continuing application to the Special Populations Programs and Services Unit of the Vocational-Technical Education Service.
2. Program Components. Each of the following is considered essential to successful operation of this program. All components, however, are not intended to be supported by the monies provided resulting in the duplication of services. Coordination and cooperation among community service providers must be evident in the design of these programs. For each component, applicants must describe what will occur and who will provide such services.
 - a) Outreach and Promotion. Outreach and promotion activities must assure reaching out into the community. The goal is to reach those who are in need of but who would ordinarily not access the services.
 - b) Assessment of Aptitude, Interests, and Special Needs. Testing used to assess the participants needs may be available within the cooperating agencies or may be purchased.
 - c) Career Guidance and Personal Counseling. This component must address career exploration and guidance as well as counseling. Career exploration must include consideration of nontraditional occupations.
 - d) Vocational/Occupational Skills Training. The job training shall be provided within the local educational agency or community college. The services and activities supported by this program shall enhance the enrollment of severely economically and educationally disadvantaged youth to those vocational education programs.
 - e) Evaluation and Follow-Up. Evaluation criteria and procedures are designed by the fiscal agent and described in the application. The procedures must include an evaluation of the progress of participants as well as of those which exit the program.
 - f) Inclusion of Business Concerns. Business concerns within the community must be involved in the conduct of this program. The applicant describes which business concerns are involved and how they are involved.

D) Funding Policy

All K-12 districts, intermediate school districts, area centers, and community colleges are eligible to apply for monies. Programs will be reimbursed at 100% of the approved costs.

The goal is to provide the highest level of services in the most economic manner. The applicants who can document a high degree of cooperation and coordination with already existing service providers, both inter and intra agency, will be given priority.

All applications are reviewed by the Special Populations Programs and Services Unit personnel. Final funding recommendations are the responsibility of the Vocational-Technical Education Service and approved by the State Board of Education.

III. REPORTING, RECORDKEEPING AND MONITORING

A) Recordkeeping. The fiscal agent will keep files which include:

1. A copy of the application (VE-4648C) with any attachments;
2. The approval letter;
3. The most current approved budget;
4. Copies of requests for and approvals of substitutions and/or additions made after approval of the original application;
5. A name roster of individuals participating;
6. A record of participation for each individual;
7. Documentation of agreements with other agencies/service providers for coordinating service delivery; and
8. Copies of all reports made to V-TES (the interim report, the final report, and financial reports).

B) Reporting

1. Interim Report. The fiscal agent will file an interim report with V-TES on Form VE-4648D.
2. Final Reports. Two final reports are submitted concurrently and are required. These reports are due 30 days following liquidation of the final expenditure or no later than 60 days following the ending date of the program. The forms are:
 - a) Form DS-4044, "Expenditure Report".
 - b) Form VE-4648E, "Final Report for CBO/LEA Collaboration Efforts for Vocational Education Services."

IV. FURTHER INFORMATION

For further information call or write:

Sherry L. Anderson, Sex Equity Coordinator
Special Populations Programs and Services Unit
Vocational-Technical Education Service
Michigan Department of Education
P. O. Box 30009
Lansing, MI 48909

(517) 373-3388

ECONOMIC DEVELOPMENT JOB TRAINING FUND
(QUIK START)

I. INTRODUCTION

The Michigan Department of Education Vocational-Technical Education Service will provide grants to eligible secondary and postsecondary institutions that operate job training programs custom-designed for: (1) new business/industry; (2) expanding business/industry; (3) business/industry that is experiencing structural unemployment, but that could retain workers if they are retrained; and (4) business/industry that have training needs due to installation of new machinery, new processes, or manufacture of a new product.

II. DEFINITIONS

- A) Structural Unemployment - Unemployment that occurs when a job no longer exists due to changing markets and/or technology.
- B) Economic Base Jobs - Jobs that result from new money coming into a community in the areas of manufacturing, research, agriculture, government installations, tourism, or service (regional or national).
- C) Non-economic Base Jobs - Jobs that arise as a result of economic base developments occurring within the community, and occur primarily in the areas of commercial establishments, education, service, and local government.
- D) Program Participants - Persons who are being trained in job skills.

III. ELIGIBILITY CRITERIA

- A) Funds from this grant can be used to operate custom-designed, short-term training programs for business/industry that provide economic base jobs and fit into one or more of the following categories:
 - 1. The business/industry is locating in the community and creating new jobs.
 - 2. The business/industry is expanding in the community and creating new jobs.
 - 3. The business/industry has employees who are about to become structurally unemployed, but who can be retained if retrained.

4. The business/industry is installing new equipment, new processes, or is manufacturing a new product for which training is required.
- B) Funds are available to the following public educational agencies:
1. Community colleges
 2. Area vocational centers
 3. Intermediate school districts
 4. Secondary programs that offer reimbursed vocational programs
 5. Adult education programs with a vocational component

IV. ADDITIONAL INFORMATION

- A) These funds are to be used to meet immediate, specific, identified work force needs and cannot be used to operate ongoing training programs.
- B) Grant funds may not be used to pay stipends and/or wages to trainees.
- C) The training phase of a training project shall last no more than 26 weeks or 1,040 hours.
- D) The educational agency/institution applying for funds must be directly responsible for the design, development, and/or delivery of the training program.
- E) The business/industry must make a financial commitment to the training project in terms of real costs incurred, such as furnishing supplies, training equipment, technical assistance, etc.
- F) A minimum match of 5 - 14 percent is required for Categories 1, 2, and 3. Projects eligible under Category 4 require a minimum match contribution of 21 - 30 percent. (Exact match requirements for an educational agency/institution can be obtained through the Quik Start Consultant.)

V. APPLICATION AND APPROVAL PROCESS

Educational agencies/institutions submit an "Application for Vocational-Technical Education Economic Development Job Training Funds" (Form VE-4679). The application includes:

- A) A description of the training project and company

- B) Project objectives with timelines and person/agency responsible
- C) Budget narrative
- D) Certification signatures from education agency/institution and company
- E) Budget worksheets
- F) Total project cost which includes grant request and the match portion of the company and/or educational agency/institution.

The application is reviewed by the Quik Start Consultant who seeks appropriate consultation from other vocational consultants (both secondary and postsecondary), and typically negotiates and seeks additional information from the applicant via phone or personal meeting. Applications are approved within fourteen days. Grants are awarded on a first come, first served basis.

For further information, contact Mrs. Dixie Grow, Quik Start Consultant, Vocational-Technical Education Service, P.O.Box 30009, Lansing, MI 48909, Ph. 517-373-0600.

JOB TRAINING PARTNERSHIP ACT
P.L. 97-300

I. INTRODUCTION

The Job Training Partnership Act (P.L. 97-300) establishes a system of state and local job training and employment preparation programs based on a cooperative partnership between state and local governments and the private sector. The act emphasizes employment and training programs to prepare eligible youth and adults for employment in the private sector. Additionally, the Act recognizes the importance of program and participant performance rather than process, and outlines a system of measurement based on performance standards for youth and adult programs.

The program is designed to provide training and other services to "economically disadvantaged persons and others facing serious barriers to employment and who are in special need of such training to obtain productive employment." Provisions within the law do allow limited waiver of the economically disadvantaged criteria. These waivers are controlled locally within each Service Delivery Area by the programs administration.

II. DEFINITIONS

- A) Administrative Entity - An agency, organization or individual designated by the private industry council and the chief elected officials as the administrator of the Job Training Program and Plan in a service delivery area.
- B) Designated Education Planning Entity - The public education agency locally designated to insure that all educational institutions within an SDA have an opportunity to participate in the development of the cooperative agreement.
- C) Economically Disadvantaged - An individual who (a) receives, or is a member of a family which receives, cash welfare payments under a Federal, State, or local welfare program; (b) has, or is a member of a family which has, received a total family income for the six-month period prior to application for the program involved, exclusive of unemployment compensation, child support payments, and welfare (payments) which, in relation to family size, was not in excess of the higher of (i) the poverty level determined in accordance with criteria established by the Director of the Office of Management and Budget, or (ii) 70 percent of the lower living standard income level; (c) is receiving food stamps pursuant to the Food Stamp Act of 1977; (d) is a foster child on behalf of whom State or local government payments are made; or (e) in cases permitted by regulations of the Secretary, is an adult handicapped individual

whose own income meets the requirements of clause (a) or (b), but who is a member of a family whose income does not meet such requirements.

- D) Hard-to-Serve - Those economically disadvantaged individuals who are to be considered the hard-to-serve must be either a school dropout, teenage parent, offender, or have drug and/or alcohol problems. Should these individuals meet the criteria for being placed on only one of the aforementioned classifications, they must satisfy the additional requirement of meeting the criteria for at least one of the following classifications: youth (ages 16-21), public assistance recipient, handicapped, displaced homemaker, minority, have limited English proficiency, older worker, no work experience, or unemployed for longer than one year.
- E) Private Industry Council - Each region of the state has established a Private Industry Council (PIC) who in conjunction with the chief elected official(s) in a service delivery area are responsible for the planning, approval, and general oversight of all programs and activities. The act requires that specific organizations and groups be represented on the Private Industry Council, including education. This education member usually is a member of the Designated Education Planning Entity and is a principle contact person with regard to all matters involving the local Private Industry Council.
- F) Youth - Means an individual who is aged 16 through 21.

III. PROGRAMS

A) Title II-A

These programs for youth and adults are determined and administered by the local Service Delivery Area. Forty percent of the funds available must be used to provide services to youth aged 16-21. Several exemplary youth programs are available providing services, training and/or work experience for youth 14 to 21 years of age. The program begins July 1 and ends June 30 of each year. Planning for these programs usually begins in January. The principle contact is the Service Delivery Area administrative entity.

B) Title II-B

The programs provide Summer Youth Employment and other services for eligible participants. The program is conducted during the summer months and may include youth 14 to 21. Planning for these activities usually begins in March under the direction of the Service Delivery Area administrative entity.

C) 8% Vocational Education

These programs are administered by the Michigan Department of Education, Adult Extended Learning Services in conjunction with the local Service Delivery Area. They provide a variety of basic skills, training, and employment services to both youth and adults. The principle focus is the delivery of services through educational agencies. Unlike the aforementioned Title II programs, this requires a 50/50 match be provided through cash or inkind services.

Planning is conducted through a Designated Education Planning Entity in each Service Delivery Area. The planning period usually begins in January and follows the Title II-A schedule.

The program offers greater flexibility than the Title II-A programs and provides a wider variety of service delivery options.

D) Title III

The Title III Dislocated Workers program is designed to provide training, re-training, and employment services to persons displaced from previous employment. Its principle focus is re-training and placement.

The program is administered through the Governor's Office for Job Training and may be conducted separately or in conjunction with other programs such as Quick Start. The planning period usually begins in January, although programs may be funded year around.

IV. SUMMARY

While there are other special programs under the Job Training Partnership Act, these represent the principle programs and funding resources available to secondary education agencies. For additional information on specific programs, funding levels, or activities in a given area, contact:

Richard A. Jackson, Supervisor
Adult Occupational Instructional Program
Adult Extended Learning Services
Michigan Department of Education
P.O. Box 30008
Lansing, Michigan 48909
PH: (517) 373-4214

OR

Richard J. Smith, JTPA Coordinator
Adult Extended Learning Services
Michigan Department of Education
P.O. Box 30008
Lansing, Michigan 48909
PH: (517) 373-3397

RFPs

V-TES issues requests for proposals periodically, as needed, to fund grants for research, development, dissemination, and technical assistance activities which will benefit vocational-technical education statewide. Examples include curriculum development, Vocational Education Resource Center operations, OCR technical assistance, the follow-up survey of former students and VEDS-Micro.

Persons who wish to receive announcements of RFPs to be issued should write or phone Jim Bebermeyer, Research Consultant, Planning, Evaluation and Finance Unit; (517) 373-6731.

THIS DOCUMENT WAS PREPARED BY:

The Michigan State Board of Education
Bureau of Educational Services
Teresa V. Staten, Associate Superintendent

Vocational-Technical Education Service
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